SUBSTATION ENGINEERING COMPANY



AC Transmission New York Public Policy Transmission Need

Technical Review Report

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Project:	AC Transmission Project Evaluation	SECO SUBSTATION ENGINEERING	
Subject:	Report Draft	COMPANY	
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1. Introduction

This report documents the technical evaluation of the thirteen proposals submitted to the New York State Independent System Operator, Inc. ("NYISO") to satisfy the AC Transmission Public Policy Transmission Need (AC Transmission PPTN) that the New York Public Service Commission ("NYPSC") identified in December 2015. In its October 27, 2017 Viability and Sufficiency Assessment Report, the NYISO reported that the thirteen proposals were viable and would be able to satisfy the public policy transmission need criteria. Four Developers submitted proposals including National Grid/Transco ("NGRID"), NextEra Energy Transmission New York ("NextEra"), North American Transmission ("NAT") and New York Power Authority ("NYPA") collectively ("NAT/NYPA"), and ITC. The thirteen proposals evaluated are:

SEGMENT A

Proposal Number	Developer	Description
T018	National Grid/Transco (NGRID)	Base proposal
T021	NextEra Energy Transmission New York	Base Proposal
T025	North America Transmission/New York Power Authority (NAT/NYPA)	765kV Proposal
T026	North America Transmission/New York Power Authority (NAT/NYPA)	Base Proposal
T027	North America Transmission/New York Power Authority (NAT/NYPA)	Double Circuit
T028	North America Transmission/New York Power Authority (NAT/NYPA)	Enhanced
T031	ITC	Base Proposal

SEGMENT B

Proposal Number	Developer	Description
T019	National Grid/Transco (NGRID)	Base Proposal
T022	NextEra Energy Transmission New York	Base Proposal
T023	NextEra Energy Transmission New York	Alternative
T029	North America Transmission/New York Power Authority (NAT/NYPA)	Base Proposal
T030	North America Transmission/New York Power Authority (NAT/NYPA)	Enhanced
T032	ITC	Base Proposal

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The primary scope and requirements of the AC Transmission PPTN, as identified and described in the NYPSC Order issued on December 17, 2015, is development and construction of the following facilities:

SEGMENT A: Edic/Marcy to New Scotland; Princetown to Rotterdam

Construction of new 345 kV line from Edic or Marcy to New Scotland on existing right-of-way (primarily using Edic to Rotterdam right-of-way west of Princetown); construction of two new 345 kV lines or two new 230 kV lines from Princetown to Rotterdam on existing Edic to Rotterdam right-of-way; decommissioning of two 230 kV lines from Edic to Rotterdam; related switching or substation work at Edic or Marcy, Princetown, Rotterdam and New Scotland.

SEGMENT B: Knickerbocker to Pleasant Valley

Construction of a new double circuit 345 kV/115 kV line from Knickerbocker to Churchtown on existing Greenbush to Pleasant Valley right-of-way; construction of a new double circuit 345 kV/115 kV line or triple circuit 345 kV/115 kV/115 kV line from Churchtown to Pleasant Valley on existing Greenbush to Pleasant Valley right-of-way; decommissioning of a double-circuit 115 kV line from Knickerbocker to Churchtown; decommissioning of one or two double-circuit 115 kV lines from Knickerbocker to Pleasant Valley; construction of a new tap of the New-Scotland-Alps 345 kV line and new Knickerbocker switching station; related switching or substation work at Greenbush, Knickerbocker, Churchtown and Pleasant Valley substations.

In addition to the Segments A and B, the NYPSC also identified in the AC Transmission PPTN upgrades to the Rock Tavern Substation and the rebuild of the Shoemaker to Sugarloaf with a new double circuit 138 kV and related substation work at Shoemaker, Hartley, South Goshen, Chester, and Sugarloaf.

The evaluation conducted by the review team included review of the thirteen proposals received from the NYISO, as well as responses to the Requests For Information (RFIs) issued to the Developers in June, September, and November 2017.

The review team's evaluation focused on the following areas:

• Site review and "walk down" of proposed sites and routes to evaluate their constructability and identify potential issues with the proposed design, siting and routing;

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- Review of the environmental and permitting requirements for the project as proposed by Developers and identify gaps and issues, which were completed predominately using "desktop" analysis supplemented with occasional field review;
- Evaluate completeness and reasonableness of the proposed project schedules and sequencing
 plans, including identification of potential issues associated with delay in obtaining permits for
 and construction of the proposed project;
- Evaluate the Developer's cost estimates by preparing independent cost estimates for each project;
- Review, identify and estimate real estate requirements;
- Identify risks associated with the projects;
- Determine expandability of proposed project;
- Assess the Developer's plans for site control; and
- Evaluate the Developer's operating plan.

The review team's evaluation did not include further evaluation of Developers' qualifications or credentials beyond the screening performed earlier in the process.

2. Executive Summary

This technical review focused primarily on schedule, cost, identifiable risks, the ability to expand on the project in the future, site control plan and availability of Rights of Way ("ROW"), and the operating plan provided by each Developer. Below is a brief summary of our findings. Please see the remainder of the report for further detail.

2.1. Schedule

Each Developer's schedule for permitting and construction of its project was evaluated based on the review team's collective experience with transmission projects sited by the New York State Public Service Commission ("NYPSC") under Article VII of the New York State Public Service Law and constructed in New York State. A review of recent Article VII electric transmission project timelines was completed to identify comparable schedules for obtaining permits and approvals needed to begin construction. The review team also estimated the amount of time required to procure equipment, construct the facilities, and test and commission the facilities in order to be placed into service. A summary of the expected durations for each Developer's proposed scope is detailed in the table below:

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Segment A Proposals	Developer Proposed Total Duration	Estimated Minimum Duration (Note #1 and #2)
T018 NGRID/Transco Segment A	48 Months	48 Months
T021 NextEra Segment A	29 Months	48 Months
T025 NAT/NYPA Segment A + 765kv	44 Months	50 Months
T026 NAT/NYPA Segment A Base	44 Months	48 Months
T027 NAT/NYPA Segment A Double	48 Months	51 Months
Circuit		
T028 NAT/NYPA Segment A Enhanced	44 Months	48 Months
T031 ITC Segment A	39 Months	48 Months
Segment B Proposals	Developer Proposed	Estimated Minimum
Segment B Proposals	Total Duration	Duration (Note #1)
T019 NGRID/Transco Segment B	48 Months	45 Months
T022 NextEra Segment B	28 Months	43 Months
T023 NextEra Segment B - Alt	29 Months	45 Months
T029 NAT/NYPA Segment B Base	40 Months	45 Months
T030 NAT/NYPA Segment B Enhanced	41 Months	45 Months
T032 ITC Segment B	53 Months	47 Months

Note #1: "Estimated Minimum Duration" is calculated using the anticipated time for Article VII application preparation, the anticipated time for the Article VII approval process, ROW procurement where significant and the anticipated time for construction of the project. The review team also assumed that the Environmental Management and Construction Plan (EM&CP) preparation is completed and ready for submission when the Article VII certificate is received. All of these components will depend on the experience and the level of resources of the developer and the complexity of the project which is further discussed in the risk register. In order to establish a reasonable normal schedule for the purpose of establishing an in-service date an additional four months should be added to the estimated minimum duration.

Note #2: For the Edic to Princetown portion of Segment A, all Developers are proposing to use existing NYPA-owned transmission line structures for about 12.5 miles of their proposed projects. If detailed engineering indicates that the existing structures are inadequate and need to be replaced, the construction schedule may increase by about 4 months however; this would be consistent across all proposed projects.

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2.2. Cost

In evaluating the construction cost of each proposal, Kenny Construction ("Kenny") prepared independent estimates for each proposal. Kenny reviewed the Developers' proposals with the costs redacted. GEI Consultants, Inc. estimated the environmental licensing and permitting costs. The results are shown below:

SEGMENT A (SUMMARY OF ESTIMATES COMPARISON WITH 30% OF CONTINGENCY)

Developer	Independent Estimate (2018 \$)
T018 National Grid/ NY Transco	\$520,156,065
T021 NextEra Energy	\$497,652,781
T025 NYPA / NAT (Base+765kV)	\$861,184,683
T026 NYPA / NAT (Base)	\$488,847,348
T027 NYPA / NAT (Double Ckt)	\$741,263,417
T028 NYPA / NAT (Enhanced)	\$512,174,151
T031 ITC	\$570,008,025

SEGMENT B (SUMMARY OF ESTIMATES COMPARISON WITH 30% OF CONTINGENCY)

Developer	Independent Estimate (2018 \$)
T019 National Grid/ NY Transco	\$445,051,522
T022 NextEra Energy	\$356,825,170
T023 NextEra Energy (Alternate)	\$389,645,078
T029 NYPA / NAT (Base)	\$386,855,640
T030 NYPA / NAT (Enhanced)	\$406,320,971
T032 ITC	\$501,856,268

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SEGMENT B (SUMMARY OF ESTIMATES COMPARISON WITH 30% OF CONTINGENCY and Global Addition of \$113M)

Developer	Independent Estimate (2018 \$)
T019 National Grid/ NY Transco	\$558,051,522
T022 NextEra Energy	\$469,825,170
T023 NextEra Energy (Alternate)	\$502,645,078
T029 NYPA / NAT (Base)	\$499,855,640
T030 NYPA / NAT (Enhanced)	\$519,320,971
T032 ITC	\$614,856,268

Notes:

- 1. Independent Estimates are adjusted to 2018 U.S. Dollars.
- 2. The estimates include the contingency rate of 30% included on the DPS estimate template. The review team has assumed the contingency to include allowance for unanticipated costs and estimating accuracy to forecast a reasonable worst case cost.
- 3. The Global Addition includes upgrades to the Rock Tavern Substation and the rebuild of the Shoemaker to Sugarloaf with a new double circuit 138 kV and related substation work at Shoemaker, Hartley, South Goshen, Chester, and Sugarloaf identified by the NYPSC in the AC Transmission Proceedings.

2.3. Risk

- 2.3.1. The review team completed a review of the potential risks associated with the proposals' schedules and cost, focusing on the most significant drivers, which include:
 - Article VII review approval process and potential environmental issues
 - Procurement of major equipment
 - Construction
 - Site Control and procurement of real estate
 - Operational Plan
- 2.3.2. The proposals share many risks in common such as potential delays in preparation and approval of regulatory licenses and permits.
- 2.3.3. The most significant risks associated with the proposals are identified as follows:

SEGMENT A

 Need to obtain additional easements for exceedance of EMF levels. The existing corridor (345kV Lines #14 and #18, and 115kV Line #13) between Princetown Junction and New Scotland Substation currently is currently estimated to exceed NYS PSC guidelines for

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EMF levels. The proposed designs improve the condition, but EMF levels are still estimated to exceed the guidelines for all proposals except T027 (NYPA/NAT Double Circuit). EMF levels will have to be confirmed during detailed engineering and may result in purchasing EMF easements from property owners along the ROW between Princetown and New Scotland.

For proposal T025 (NYPA/NAT proposal to convert the existing line to 765kV) there is a significant risk to the project's cost and schedule due to (i) potential public opposition, (ii) the potential need to replace the transmission line hardware due to potential corona issues and (iii) additional EMF concerns due to the higher operating voltage of the facility. An allowance was added to the independent estimate to account for the potential cost of mitigation.

SEGMENT B

While the NYPSC encouraged that new structures have minimal increase in height, the
construction of new structures even with minimal increase in height may result in public
opposition due to their visual impact.

2.4. Expandability

- 2.4.1. The review team evaluated the potential for future expansion of the proposed transmission solutions to increase their capacity. Many of the more common design approaches that could be employed on a transmission project to afford future expandability are not applicable since the objective of this project is to utilize existing transmission rights-of-way (ROW) and property. Much of the existing transmission ROW will be fully utilized in construction of this project but there is some opportunity for expansion described below.
 - 2.4.1.1. All proposals for Segment A involve replacement of the existing Porter-Rotterdam 230 kV circuits #30 and #31 with a single Edic to New Scotland 345kV line. This will provide space for future use of the existing ROW and may allow the addition of another circuit from Edic/Porter to Princetown Junction. During detailed engineering the placement of structures should be optimized to maximize the remaining ROW.
 - 2.4.1.2. The proposed new substations provide the potential for future line terminal and transformer additions.

2.5. Site Control and Real Estate

2.5.1. In all of the proposals, the following is common for the property rights acquisition process:

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- All Developers propose to use existing ROW for their transmission facilities.
- Some additional real estate is required for new substation construction at Princetown Junction.
 - NextEra's project (T021) proposes a new greenfield site located between
 Princetown Junction and Rotterdam, and has an option to purchase the real estate for the substation.
 - ITC's project (T031) proposes a larger substation at Princetown Junction than the substations proposed by other projects, and will require additional property acquisition.
- All Developers have completed preliminary routing of their proposed lines.
- All Developers have documented plans to obtain site control.
- 2.5.2. The non-incumbent Developers all claim common rights in obtaining real property:
 - The Developers cite to the NYPSC's December 17, 2015 order in the AC Transmission proceedings (Case Nos. 12-T-0502, et al.) as requiring incumbent utilities to engage in non-discriminatory, good faith negotiation of terms in obtaining the right to use an incumbent utility's ROW. The Order further stated that "incumbent utilities should offer competitors the same terms they offer Transco; there should be no bias shown to Transco."

2.6. Operational Plan

- 2.6.1. The review team conducted a review of the Developers' operations and maintenance plans associated with the proposals. The review team did not identify any major flaws with the Developer's plans and the plans are essentially the same.
- 2.6.2. For the non-incumbent Developer proposals, the following aspects are common:
 - The Developers stated that all O&M activities will comply with required NERC regulations.
 - Proposed facilities will have real-time reporting of operating data.
- 2.6.3. The non-incumbent Developers proposed the following arrangements for Control Center services:
 - ITC proposes to use their Control Center in Novi MI. to provide control center services
 - NextEra proposes to construct a physical control center in New York to provide control center services.
 - NAT/NYPA proposed to utilize the NYPA Control Center for control center services.

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3. Discussion of Proposals

Brief descriptions of the proposed projects are provided below.

SEGMENT A

3.1. T018 - NGRID/Transco - New Energy Solution Segment A

NGRID/Transco proposal T018 includes the following major work items:

- New Rotterdam 345 kV Substation (Converted from 230 kV); Two New 345/115 kV transformers; New 345/230 kV transformer; New 135 MVAr Capacitor Bank
- New Scotland 345 kV Substation Upgrade and Expansion
- New Overhead Edic New Scotland 345 kV line
- Two New Overhead Princetown Junction Rotterdam 345 kV lines (Princetown Junction taps existing Edic – New Scotland 345 kV)
- Retire two existing Porter Rotterdam 230 kV lines

3.2. T021 - NextEra - Enterprise Line - Segment A

NextEra proposal T021 includes the following major work items:

- New 345/230kV Princetown Substation (taps existing Marcy New Scotland 345 kV line);
 Two New 345/230kV transformers
- Two New Overhead Princetown Rotterdam 230 kV lines
- New Overhead Edic New Scotland 345 kV line
- Retire two existing Porter Rotterdam 230 kV lines

3.3. T025 - NAT/NYPA - Segment A - A + 765 KV

NAT/NYPA "Segment A + 765 KV" proposal T025 includes the following major work items:

- New Knickerbocker 765/345 kV Substation (taps existing New Scotland Alps 345 kV line);
 Two New 765/345 kV transformers
- New Rotterdam 345 kV Substation (Converted from 230 kV, taps existing Edic New Scotland 345 kV line); Two New 345/115 kV transformers; New 345/230 kV transformer
- New Princetown 345 kV Switching Station (taps existing Edic New Scotland 345 kV line)
- New Overhead Edic Princetown New Scotland 345 kV line
- Terminal Upgrades at Marcy 345 kV and Edic 345 kV
- Convert existing Marcy New Scotland Alps 345 kV line to Marcy Knickerbocker 765 kV line (Knickerbocker Alps section remains operated at 345 kV). This includes the rebuild of approximately 1.5 mile of line from Marcy to Mk-B and construction of a 1 mile line bypass around New Scotland. It also includes "Network Upgrades" to modify the existing line to mitigate potential Corona Issues.

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Retire two existing Porter – Rotterdam 230 kV lines

3.4. T026 - NAT/NYPA - Segment A - Base

NAT/NYPA Segment A "Base" proposal T025 includes the following major work items:

- Retire Porter to Rotterdam 230kV lines #30 and #31
- New Rotterdam 345 kV Substation with 2 new 345/115 kV transformers and 1 new 345/230 kV transformer
- New Edic to New Scotland 345kV transmission line (double-bundle)
- Loop existing Edic to New Scotland 345kV line #14 to Rotterdam 345kV substation with 2 new transmission lines
- Terminal upgrades at Marcy and Edic
- New Scotland 345 kV Substation reconfiguration

3.5. T027 – NAT/NYPA Segment A - Double Circuit

NAT/NYPA proposal T027 includes the following major work items:

- Retire Porter to Rotterdam 230kV lines #30 and #31
- New Rotterdam 345 kV Substation with 2 new 345/115 kV transformers(lower impedance) and 1 new 345/230 kV transformer
- Two new Edic to New Scotland 345kV transmission lines
- Loop existing Edic to New Scotland 345kV line #14 to Rotterdam 345kV substation with 2 new transmission lines
- New Princetown switching station, tapping the two new Edic-New Scotland lines and the Rotterdam - New Scotland 345kV line
- Terminal upgrades at Marcy and Edic
- New Scotland 345 kV Substation reconfiguration
- · Retire Rotterdam to New Scotland 115 kV line

3.6. T028 – NAT/NYPA Segment A - Enhanced

NAT/NYPA proposal T028 includes the following major work items:

- Retire Porter to Rotterdam 230kV lines #30 and #31
- New Rotterdam 345 kV Substation with 2 new 345/115 kV transformers(lower impedance) and 1 new 345/230 kV transformer
- New Edic to New Scotland 345kV transmission line (double-bundle)
- Loop existing Edic to New Scotland 345kV line #14 to Rotterdam 345kV substation with 2 new transmission lines
- New Princetown switching station, tapping the new Edic-New Scotland and the Rotterdam
 New Scotland 345kV lines

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- Terminal upgrades at Marcy and Edic
- New Scotland 345 kV Substation reconfiguration

3.7. T031 – ITC Segment A - 16NYPP1-1A

ITC's "16NYPP1-1A" proposal T031 includes the following major work items:

- New Princetown 345 kV Switching Station (taps existing Marcy New Scotland 345 kV and Edic – New Scotland 345 kV lines)
- New Rotterdam 345 kV Switching Station Expansion; Two New 345/230 kV transformers
- New Overhead Edic Princetown 345 kV line
- New Overhead Princetown New Scotland 345 kV line
- Two New Overhead Princetown Rotterdam 345 kV lines
- Rebuild Princetown New Scotland 345 kV line (existing Edic New Scotland 345 kV line)
- Retire two existing Porter Rotterdam 230 kV lines

SEGMENT B

All Segment B projects include terminal upgrades for Coopers Corners – Rock Tavern 345 kV lines to be performed by Central Hudson, and upgrades on Shoemaker – Sugarloaf to be performed by Orange & Rockland.

3.8. T019 - NGRID/Transco - New Energy Solution Segment B

NGRID/Transco's proposal T019 includes the following major work items:

- New Knickerbocker 345 kV Switching Station (taps existing New Scotland Alps 345 kV line)
- Rebuild Churchtown 115 kV Switching Station
- Upgrade Pleasant Valley 345 kV and 115 kV substations; Two 135 MVAr Capacitor Banks at Pleasant Valley 345 kV
- Terminal Upgrades Roseton 345 kV (for Roseton East Fishkill 345 kV line)
- Terminal Upgrades New Scotland 345 kV (for proposed New Scotland Knickerbocker 345 kV line)
- New Overhead 345/115 kV double-circuit Knickerbocker Pleasant Valley line (reconductor portions of the 115 kV line); 50% Series Compensation at Knickerbocker 345 kV
- Multiple retirements and reconfigurations on 115 kV lines between Greenbush Pleasant Valley 115 kV

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3.9. T022 – NextEra – Enterprise Line - Segment B

NextEra's proposal T022 includes the following major work items:

- New Knickerbocker 345kV Switching Station (taps existing New Scotland Alps 345 kV line)
- New North Churchtown 115kV Switching Station (taps existing Churchtown Valkin 115 kV line)
- New overhead 345kV line from Knickerbocker to Pleasant Valley. Line is double-circuit 345/115kV between Knickerbocker and Churchtown (new 115 kV line terminates at North Churchtown).
- Rebuild Greenbush North Churchtown 115 kV line
- Multiple retirements and reconfigurations on 115 kV lines between Greenbush Pleasant Valley 115 kV

3.10. T023 – NextEra– Enterprise Line Segment B

NextEra's proposal T023 builds on T022 by adding:

Additional 115 kV upgrades between Churchtown - Pleasant Valley (Retires the 115 kV line from Churchtown-Pleasant Valley and extends the new 345/115 kV double circuit from Churchtown to Pleasant Valley).

3.11. T029 - NAT/NYPA Segment B - Base

NAT/NYPA proposal T029 includes the following major work items:

- New Knickerbocker 345 kV Switching Station (taps existing New Scotland Alps 345 kV line)
- Rebuild Churchtown 115 kV Switching Station
- New Overhead double-circuit Knickerbocker Pleasant Valley 345/115 kV line (345 kV line is double-bundled)
- Multiple retirements and reconfigurations on 115 kV lines between Greenbush Pleasant Valley 115 kV
- Replace Middletown Tap 345/138 kV transformer and reconductor Shoemaker tap to Shoemaker 138 kV line

3.12. T030 - NAT/NYPA Segment B - Enhanced

NAT/NYPA Segment B "Enhanced" proposal T030 includes the following major work items:

- New Knickerbocker 345 kV Switching Station (taps existing New Scotland Alps 345 kV line)
- Rebuild Churchtown 115 kV Switching Station

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- New Overhead double-circuit Knickerbocker Pleasant Valley 345/115 kV line (345 kV line is triple-bundled)
- Multiple retirements and reconfigurations on 115 kV lines between Greenbush Pleasant Valley 115 kV
- Replace Middletown Tap 345/138 kV transformer and reconductor Shoemaker tap to Shoemaker 138 kV line

3.13. T032 - ITC Segment B - 16NYPP1-1B

ITC Segment B "16NYPP1-1B" proposal T032 includes the following major work items:

- New Knickerbocker 345 kV and new Knickerbocker 115 kV Switching Station (taps existing New Scotland – Alps 345 kV and Greenbush – Pleasant Valley 115 kV, respectively)
- New Overhead double-circuit Knickerbocker Pleasant Valley 345/115 kV line (triple-circuit 345/115/115 kV from Churchtown Pleasant Valley)
- Terminal Upgrades at multiple 115 kV Substations: Greenbush 115 kV, Hudson 115 kV, LaFarge 115 kV, North Catskill 115 kV, Milan 115 kV
- Multiple retirements and reconfigurations on 115 kV lines between proposed Knickerbocker – Pleasant Valley 115 kV

4. Evaluation

4.1. Schedule

In evaluating the schedule for the proposed projects, the NYISO OATT section 31.4.8.1.7 provides the following evaluation criteria: "The potential issues associated with delay in constructing the proposed regulated Public Policy Transmission Project consistent with the major milestone schedule and the schedule for obtaining any permits and other certifications as required to timely meet the need."

The review team has completed an evaluation of the schedules submitted with each proposal. In its evaluation of the proposals, the review team leveraged its collective experience with the development, construction and maintenance of transmission line and substation projects in New York State, and compared the proposed schedules to actual Article VII electric transmission projects completed in New York.

Several Developers appear to assume that the selected project or projects could be subject to an expedited Article VII process. Since the NYPSC has not ruled on whether the expedited review process will be available for a specific project's application for an Article VII certification, this analysis is based on standard historical durations for siting review. Our

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conclusion for the Article VII process minimum durations based upon "best case" assumptions is as follows:

Task	Duration based on construction primarily on Existing ROW
Prepare and submit complete Article VII application (estimate)	6 mo.
PSC issue Certificate (minimum based on past comparable Article VII projects)	12 mo.
Prepare and submit EM&CP (best case: assumes no major changes to design required in Certificate, and prepared during Article VII proceedings)	0 mo.
DPS review and approve EM&CP (based on past comparable Article VII projects)	6 mo.
Total: Best Case Submit Article VII application until Start Construction	18 mo.
Total: Best Case Prepare Article VII application until Start Construction	24 mo.

The main drivers to the project schedule durations considered were:

- Article VII licensing process
- Procurement of major equipment
- Real Estate requirements
- Construction requirements.

The project minimum durations discussed in this evaluation assume that preparation of the Article VII application and real estate procurement negotiations will begin at the time the project is awarded to the Developer and that any preliminary work required has already been completed by the Developer prior to that date. Likewise, the review team assumes that work to file the first EM&CP segment is complete prior to receipt of Article VII Certificate and there are no major changes to the project's design required in the Article VII Certificate.

The review team developed Gantt chart schedules for each project to show a reasonable time line for each proposal, and appended them to this report as Attachment A.

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An evaluation of the construction component of the proposals was completed by Kenny Construction.

Considering that the evaluation focused on establishing reasonable minimum schedule durations, the review team also recommended that some float be added to the schedule to establish a reasonable schedule recognizing the potential for minor delays for the purpose of determining the in-service date once a project is selected. The review team recommends adding 4 months total to each minimum schedule to account for the following float:

- Two months to the construction schedule for each proposal to account for typical slippage of construction activities (*i.e.*, potential weather events, delays if construction crews are needed to respond and provide storm support, unanticipated material and equipment issues, and inability to obtain outages on a timely basis); and
- Two months to the schedule for licensing and permitting activities between the NYPSC issuing the Article VII Certificate and the submittal of the EM&CP to account for possible delays in submitting the EMCP should the PSC require changes to the plan submitted in the application.

Summarized below are the review team's findings for Segment A:

4.1.1. National Grid/Transco Proposal T018 – Segment A

- The Developer included 5 months for Article VII application preparation. Based on experience the review team allocated six months.
- Overall Article VII process schedule is adequate.
- Time for procurement of major equipment is adequate.
- The project is to utilize ROW owned by National Grid and some additional easement to satisfy EMF requirements. The review team believes the Developer has adequate time in its schedule to acquire ROW.
- Overall Construction schedule is adequate.
- The proposed project duration is 48 months. The review team believes that is adequate for this project.

4.1.2. NextEra Proposal T021 – Segment A

- The Developer included six months for Article VII application preparation. Based on experience the review team believes that to be adequate.
- The Developer included nine months for the overall Article VII process (from submission of Article VII application to EM&CP approval). Based on comparable Article VII projects the review team believes that process will take at least 18 months.

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- NextEra's schedule is showing that it expects substation EM&CP approval in about 3
 months to allow for an earlier start on substation construction. Approval is unlikely to
 be granted that quickly and the review team believes that approval will take a
 minimum of six months.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid and some additional
 easement to satisfy EMF requirements. The review team believes the Developer has
 adequate time in its schedule to acquire ROW.
- Overall Construction schedule includes 14 months. Based on experience with similar work the review team believes the work will take at least 24 months.
- Their proposed project duration is 29 months. The review team believes that at least 48 months will be required to complete this project.

4.1.3. NYPA/NAT Segment A

- 4.1.3.1. Proposal T025 Segment A + 765kv Proposal
 - The Developer included six months for Article VII application preparation.

 Based on experience the review team believes that to be adequate.
 - The Developer included 13 months for the overall Article VII process (from submission of Article VII application to EM&CP approval). Based on comparable Article VII projects the review team believes that process will take at least 20 months. (Two additional months were added to the estimated minimum time period to account for anticipated additional issues associated with the 765 kV line.) The Developer's schedule is showing start construction at receipt of Article VII Certificate. At least six months will be required for EM&CP approval.
 - Time for procurement of major equipment is adequate.
 - The project is to utilize existing ROW owned by National Grid and some owned by NYPA as well as some additional easement to satisfy EMF requirements. The review team believes the Developer has adequate time in its schedule to acquire ROW.
 - Overall Construction schedule is adequate.
 - Their proposed project duration is 44 months. The review team believes that at least 50 months will be required to complete this project.

4.1.3.2. Proposal T026 – Segment A Base Proposal

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- The Developer has included six months for Article VII application preparation.

 Based on experience the review team believes that to be adequate.
- The Developer has included 13 months for the overall Article VII process (from submission of Article VII application to EM&CP approval). Based on comparable Article VII projects the review team believes that process will take at least 18 months. The Developer's schedule is showing start construction at receipt of Article VII Certificate. At least six months will be required for EM&CP approval.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid and some additional easement to satisfy EMF requirements. The review team believes the Developer has adequate time in its schedule to acquire ROW.
- Overall Construction schedule is adequate.
- The Developer's proposed project duration is 44 months. The review team believes that at least 48 months will be required to complete this project.

4.1.3.3. Proposal T027 – Segment A Double Circuit

- The Developer has included six months for Article VII application preparation.

 Based on experience the review team believes that to be adequate.
- The Developer has included 13 months for the overall Article VII process (from submission of Article VII application to EM&CP approval). Based on comparable Article VII projects the review team believes that process will take at least 18 months. The Developer's schedule is showing start construction at receipt of Article VII Certificate. At least six months will be required for EM&CP approval.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid. The review team believes the Developer has adequate time in its schedule to acquire ROW.
- The Developer's overall Construction schedule of 29 months is adequate. The review team believes that a minimum of 27 months will be required.
- The Developer's proposed project duration is 48 months. The review team believes that at least 51 months will be required to complete this project.

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4.1.3.4. Proposal T028 – Segment A Enhanced Proposal

- The Developer has included six months for Article VII application preparation.

 Based on experience the review team believes that to be adequate.
- The Developer has have included 13 months for the overall Article VII process
 (from submission of Article VII application to EM&CP approval). Based on
 comparable Article VII projects the review team believes that process will take
 at least 18 months. The Developer's schedule is showing start construction at
 receipt of Article VII Certificate. At least six months will be required for
 EM&CP approval.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid and some additional easement to satisfy EMF requirements. The review team believes the Developer has adequate time in its schedule to acquire ROW.
- Overall Construction schedule is adequate.
- The Developer's proposed project duration is 44 months. The review team believes that at least 48 months will be required to complete this project.

4.1.4. ITC Proposal T031 Segment A

- Inconsistencies exist between ITC's Milestone Schedule Table, Text in Attachment B, and their Gantt Chart which show different dates and durations for their schedule.
 Attachment C Milestone Schedule Table was used to document the developer proposed durations.
- The Developer has included seven months for Article VII application preparation.

 Based on experience the review team believes that to be adequate
- The Developer has included 10 months for the overall Article VII process (from submission of Article VII application to EM&CP approval). Based on comparable Article VII projects the review team believes that process will take at least 18 months.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid and some additional
 easement to satisfy EMF requirements. The review team believes the Developer has
 adequate time in its schedule to acquire ROW.
- Overall Construction schedule includes 22 months. Based on experience with similar work the review team believes the work will take at least 24 months.
- The Developer's proposed project duration is 39 months. The review team believes that at least 48 months will be required for this project.

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Summarized below are the review team's findings for Segment B:

4.1.5. National Grid/Transco Proposal T019 – Segment B

- The Developer has included five months for Article VII application preparation. Based on experience the review team would allocate six months.
- Overall Article VII process schedule is adequate.
- Time for procurement of major equipment is adequate.
- The project is to utilize ROW owned by National Grid.
- Overall Construction schedule of 24 months is adequate. The review team estimates that a minimum of 21 months will be required.
- The Developer's proposed project duration is 48 months. The review team believes that is adequate for this project.

4.1.6. NextEra Segment B Proposals

4.1.6.1. NextEra Proposal T022 – Segment B

- The Developer has included six months for Article VII application preparation.

 Based on experience the review team believes that to be adequate.
- They have included 9 months for the overall Article VII process (from submission of Article VII application to EM&CP approval). Based on comparable Article VII projects the review team believes that process will take at least 18 months.
- NextEra's schedule is showing that it expects substation EM&CP approval in about three months to allow for an earlier start on substation construction.
 The review team believes that it is unlikely for approval to be granted that quickly and believe that approval will take a minimum of six months.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid. The review team believes the Developer has adequate time in its schedule to obtain a lease.
- Overall Construction schedule includes 13 months. Based on experience with similar work the review team believes the work will take at least 19 months.
- The Developer's proposed project duration is 28 months. The review team believes that at least 43 months will be required to complete this project.

4.1.6.2. NextEra Proposal T023 – Segment B Alt

• The Developer has included six months for Article VII application preparation.

Based on experience the review team believes that to be adequate.

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- The Developer has included nine months for the overall Article VII process (from submission of Article VII application to EM&CP approval). Based on comparable Article VII projects the review team believes that process will take at least 18 months.
- NextEra's schedule is showing that it expects substation EM&CP approval in about three months to allow for an earlier start on substation construction.
 The review team believes that it is unlikely for approval to be granted that quickly and believe that approval will take a minimum of six months.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid. The review team believes the Developer has adequate time in its schedule to transfer ownership.
- Overall Construction schedule includes 14 months. Based on experience with similar work the review team believes the work will take at least 21 months.
- The Developer's proposed project duration is 29 months. The review team believes that at least 45 months will be required to complete this project.

4.1.7. NYPA/NAT Segment B Proposals

4.1.7.1. NYPA/NAT Proposal T029 - Segment B Base

- The Developer has included six months for Article VII application preparation.

 Based on experience the review team believes that to be adequate.
- The Developer has included 13 months for the overall Article VII process
 (from submission of Article VII application to EM&CP approval). Based on
 comparable Article VII projects the review team believes that process will take
 at least 18 months. The Developer's schedule is showing start construction at
 receipt of Article VII certificate. At least six months will be required for
 EM&CP approval.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid. The review team believes the Developer has adequate time in its schedule to obtain a lease.
- Overall Construction schedule is adequate.
- The Developer's proposed project duration is 40 months. The review team believes that at least 45 months will be required for this project.

4.1.7.2. NYPA/NAT Proposal T030 – Segment B Enhanced

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- The Developer has included six months for Article VII application preparation. Based on experience the review team believes that to be adequate.
- The Developer has included 13 months for the overall Article VII process
 (from submission of Article VII application to EM&CP approval). Based on
 comparable Article VII projects the review team believes that process will
 take at least 18 months. The Developer's schedule is showing start
 construction at receipt of Article VII certificate. At least six months will be
 required for EM&CP approval.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid. The review team believe the Developer has adequate time in its schedule to obtain a lease.
- Overall Construction schedule is adequate.
- The Developer's proposed project duration is 41 months. The review team believes that at least 45 months will be required for this project.

4.1.8. ITC Proposal T032 – Segment B

- Inconsistencies exist between ITC's Milestone Schedule Table, Text in Attachment B, and their Gantt Chart which show different dates and durations for their schedule.
 Attachment C Milestone Schedule Table was used to document the developer proposed durations.
- ITC's schedule assumes that Segment A is to be constructed first followed by Segment B and that both segments cannot be constructed at the same time due to outage constraints. The Developer states that if that is not the case, its construction schedule for Segment B could be moved back by one year.
- The Developer has included seven months for Article VII application preparation.

 Based on experience the review team believes that to be adequate
- Overall Article VII process schedule is adequate.
- Time for procurement of major equipment is adequate.
- The project is to utilize existing ROW owned by National Grid. The review team believes the Developer has adequate time in their schedule to obtain a lease.
- Overall Construction schedule includes 19 months. Based on experience with similar work the review team believes the work will take at least 23 months.
- The Developer's proposed project duration is 53 months. The review team believes that 47 months is adequate for this project.

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Conclusion

Based on its review, the review team estimates the following total project durations:

Segment A Proposals	Developer Proposed Total Duration	Estimated Minimum Duration (Note #1 and #2)
T018 NGRID/Transco Segment A	48 Months	48 Months
T021 NextEra Segment A	29 Months	48 Months
T025 NAT/NYPA Segment A + 765kv	44 Months	50 Months
T026 NAT/NYPA Segment A Base	44 Months	48 Months
T027 NAT/NYPA Segment A Double Circuit	48 Months	51 Months
T028 NAT/NYPA Segment A Enhanced	44 Months	48 Months
T031 ITC Segment A	39 Months	48 Months

Segment B Proposals	Developer Proposed Total Duration	Estimated Minimum Duration (Note #1)
T019 NGRID/Transco Segment B	48 Months	45 Months
T022 NextEra Segment B	28 Months	43 Months
T023 NextEra Segment B - Alt	29 Months	45 Months
T029 NAT/NYPA Segment B Base	40 Months	45 Months
T030 NAT/NYPA Segment B Enhanced	41 Months	45 Months
T032 ITC Segment B	53 Months	47 Months

Note #1: "Estimated Minimum Duration" is calculated using the anticipated time for Article VII application preparation, the anticipated time for the Article VII approval process, ROW procurement where significant and the anticipated time for construction of the project. The review team also assumed that the EM&CP preparation is completed and ready for submission when the Article VII Certificate is received. All of these components will depend on the experience and the level of resources of the developer and the complexity of the project which is further discussed in the risk register. In order to establish a reasonable normal schedule for the purpose of establishing an inservice date, an additional four months should be added to the estimated minimum duration.

Note #2: For the Edic to Princetown portion of segment A, all developers are proposing to reuse existing NYPA owned transmission line structures for about 12.5 miles. If detailed engineering indicates that the structures are not adequate and need to be replaced the construction schedule may increase by about 4 months however, this would be consistent across all proposed projects.

4.2. Cost

In evaluating the cost of proposed Public Policy Transmission Project, the NYISO OATT section 31.4.8.1.1 specifies the following criteria: "The capital cost estimates for the proposed regulated Public Policy Transmission Project, including the accuracy of the proposed estimates. For this evaluation, the Developer shall provide the ISO with credible capital cost estimates for its proposed project, with itemized supporting work sheets that identify all

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material and labor cost assumptions, and related drawings to the extent applicable and available. The work sheets should include an estimated quantification of cost variance, providing an assumed plus/minus range around the capital cost estimate. The estimate shall include all components that are needed to meet the Public Policy Transmission Need. To the extent information is available, the Developer should itemize: material and labor cost by equipment, engineering and design work, permitting, site acquisition, procurement and construction work, and commissioning needed for the proposed project, all in accordance with Good Utility Practice. For each of these cost categories, the Developer should specify the nature and estimated cost of all major project components and estimate the cost of the work to be done at each substation and/or on each feeder to physically and electrically connect each facility to the existing system. The work sheets should itemize to the extent applicable and available all equipment for: (i) the proposed project, (ii) interconnection facilities (including Attachment Facilities and Direct Assignment Facilities), and (iii) Network Upgrade Facilities, System Upgrade Facilities, System Deliverability Upgrades, Network Upgrades, and Distribution Upgrades."

In evaluating the construction cost of each proposal, Kenny Construction ("Kenny") prepared independent estimates independent estimates of the construction costs for each proposal. In doing so, Kenny reviewed the Developers' proposals with the costs redacted. GEI Consultants, Inc. estimated the environmental licensing and permitting costs.

The estimates were prepared in accordance with the Association for the Advancement of Cost Engineering International Recommended Practice for Class 4 Accuracy. The expected accuracy range typically varies from a low of (-15% to -30%) and high of (+20% to +50%).

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ESTIMATE CLASS	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges
Class 4	1% to 15%	Study or feasibility	Equipment factored or parametric models	L: -15% to -30% H: +20% to +50%

The estimates include the contingency rate of 30% included on the DPS estimate template. The review team assumes the contingency to include allowance for unanticipated costs and estimating accuracy to forecast a reasonable worst case cost.

A summary of the results are shown below:

SEGMENT A (SUMMARY OF ESTIMATE COMPARISON)

Developer	Independent Estimate (2018 \$)			
T018 National Grid/ NY Transco	\$400,120,050			
T021 NextEra Energy	\$382,809,831			
T025 NYPA / NAT (Base+765kV)	\$662,449,756			
T026 NYPA / NAT (Base)	\$376,036,422			
T027 NYPA / NAT (Double Ckt)	\$570,202,629			
T028 NYPA / NAT (Enhanced)	\$393,980,116			
T031 ITC	\$438,467,712			

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SEGMENT A (SUMMARY OF ESTIMATES COMPARISON WITH 30% OF CONTINGENCY)

Developer	Independent Estimate (2018 \$)
T018 National Grid/ NY Transco	\$520,156,065
T021 NextEra Energy	\$497,652,781
T025 NYPA / NAT (Base+765kV)	\$861,184,683
T026 NYPA / NAT (Base)	\$488,847,348
T027 NYPA / NAT (Double Ckt)	\$741,263,417
T028 NYPA / NAT (Enhanced)	\$512,174,151
T031 ITC	\$570,008,025

SEGMENT B (SUMMARY OF ESTIMATE COMPARISON)

Developer	Independent Estimate (2018 \$)
T019 National Grid/ NY Transco	\$342,347,324
T022 NextEra Energy	\$274,480,900
T023 NextEra Energy (Alternate)	\$299,726,983
T029 NYPA / NAT (Base)	\$297,581,261
T030 NYPA / NAT (Enhanced)	\$312,554,593
T032 ITC	\$386,043,283

SEGMENT B (SUMMARY OF ESTIMATES COMPARISON WITH 30% OF CONTINGENCY)

Developer	Independent Estimate (2018 \$)
T019 National Grid/ NY Transco	\$445,051,522
T022 NextEra Energy	\$356,825,170
T023 NextEra Energy (Alternate)	\$389,645,078
T029 NYPA / NAT (Base)	\$386,855,640
T030 NYPA / NAT (Enhanced)	\$406,320,971
T032 ITC	\$501,856,268

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SEGMENT B (SUMMARY OF ESTIMATES COMPARISON WITH 30% OF CONTINGENCY and Global Addition of \$113M)

Developer	Independent Estimate (2018 \$)
T019 National Grid/ NY Transco	\$558,051,522
T022 NextEra Energy	\$469,825,170
T023 NextEra Energy (Alternate)	\$502,645,078
T029 NYPA / NAT (Base)	\$499,855,640
T030 NYPA / NAT (Enhanced)	\$519,320,971
T032 ITC	\$614,856,268

Notes:

- 1. Independent Estimates are adjusted to 2018 U.S. Dollars.
- 2. The estimates include the contingency rate of 30% included on the DPS estimate template. We have assumed the contingency to include allowance for unanticipated costs and estimating accuracy to forecast a reasonable worst case cost.
- 3. The Global Addition includes upgrades to the Rock Tavern Substation and the rebuild of the Shoemaker to Sugarloaf with a new double circuit 138 kV and related substation work at Shoemaker, Hartley, South Goshen, Chester, and Sugarloaf identified by the NYPSC in the AC Transmission Proceedings.

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The following tables highlight the significant technical differences between the proposals that drive the differences in estimated costs.

Segment A					
			Major Techni	cal Differences in Prop	oosals
Developer	Project	Princetown Substation	Rotterdam Substation	Transmission Lines	Other
NGRID/Transco	T018 Base	No	Rebuilds with GIS and includes 345kV Capacitor	Proposed heavier structures than NYPA/NAT, which has a similar design. Concrete foundations on all structures other than H-pole tangent structures.	
NextEra	T021 Base	Includes Princetown at new site. Includes (2) 345- 230kV transformers and 230kV yard	No, retains existing Rotterdam	Monopole Design - less ROW rqd. Concrete Poles	
	T025 765kV	Yes	Rebuilds, no capacitor	Direct embedded tangent structures	765Kv line (converted from 345 kV) and new Knickerbocker 765kV substation
NYPA/NAT	T026 Base	No	Rebuilds, no capacitor		
	T027 Dbl Ckt	Yes, is GIS	Rebuilds, no capacitor	Double Circuit Edic to NS	
	T028 Enhanced	Yes	Rebuilds, no capacitor	Same as T026, but adds Princetown Sub	
ITC	T031 Base	Yes -with all 8 lines terminated.	Adds new 345/230 Transformer s and retains existing station	Rebuilds #14 line from Princetown to NS. Has approx. 30% more trans structures	

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Segment B					
Developer	Project	l N	/lajor Technical Diff	erences in Proposals	
		Churchtown Substation	Other Substations	Transmission Lines	Other
NGRID/Transco	T019 Base	Complete Rebuild	Includes 345 kV Series Comp at Knickerbocker, Capacitors at P.V., Breakers at Schodak 115 kV	Proposed heavier structures than NYPA/NAT. Concrete foundations on all structures	
NextEra	T022 Base	New "North" Churchtown and retains existing Churchtown SS.		Monopole Design - less ROW rqd. Concrete Poles. Does not include replacement of 32 miles of Ckts 12 and 13.	
	T023	Similar to T022 but has one less line terminal		Includes replacement of 32 miles of 115kV Churchtown to PV	
NYPA/NAT	T029 Base	Complete Rebuild	Breakers at Schodak		
	T030	Complete Rebuild	Breakers at Schodak	Same as T029 but triple bundled 345kV conductor	
ITC	T032 Base	Adds breaker at existing station, and builds new Knickerbocker 115kV		Has approx. 30% more trans structures	

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A summary of the independent estimate (raw costs in \$1,000's) for each Developer's proposal follows:

Segment A Proposals

4.2.1. T018 National Grid/Transco Segment A

National Grid and NY Transco (T018)			
			Total
		Description	Amount (In
			thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$52,139
	1.2	Foundations	\$38,037
	1.3	Structures	\$67,033
	1.4	Conductor, Shiedwire and OPGW	\$35,990
	1.5	Insulators, Fitting and Hardwares	\$10,840
		Subtotal (1)	\$204,039
	2	Substations	
st	2.1	Rotterdam Substation	\$48,141
2	2.2	Edic Substation	\$2,117
Direct Cost	2.3	Princetown Substation	\$0
□	2.4	New Scotland Substation	\$7,037
	2.5	Porter Substation	\$546
	2.6	Knickerbocker Substation	\$0
	2.7	Marcy Substation	\$0
	2.8	Substation Interconnections	\$8,459
	Subtotal (2)		\$66,301
		Total (1+2)	\$270,340
		Contractors Mark-up (15% of Total 1+2)	\$40,551
		Total Direct Cost (A)	\$310,891
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,711
ts	3.2	Project Management, Material Handling & Amenities	\$18,402
Indirect Cost	3.3	Engineering	\$18,121
ect	3.4	Testing & Commissioning	\$1,559
μ	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$20,144
_ =	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,719
		Total Indirect Cost (3)	\$77,575
		Subtotal Project Cost (B=A+3) 2017 \$	\$388,466
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project	\$0
	4.2	NUF identified during Evaluation	\$0
		Subtotal NUF Cost (C)	\$0
		Total Project Cost (B+C) 2017 \$	\$388,466
		Total Project Cost 2018 \$	\$400,120
		Total Floject Cost 2018 \$	3400,120

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4.2.2. T021 NextEra Segment A

	NextEra Energy (T021)			
			Total	
		Description	Amount (In	
		·	thousand \$)	
	1	Transmission Lines	·	
	1.1	Clearing & Access	\$55,279	
	1.2	Foundations	\$18,318	
	1.3	Structures	\$74,701	
	1.4	Conductor, Shiedwire and OPGW	\$38,661	
	1.5	Insulators, Fitting and Hardwares	\$18,280	
		Subtotal (1)	\$205,239	
	2	Substations		
ost	2.1	Rotterdam Substation	\$850	
Direct Cost	2.2	Edic Substation	\$2,153	
rec	2.3	Princetown Substation	\$40,296	
Ӓ	2.4	New Scotland Substation	\$6,883	
	2.5	Porter Substation	\$546	
	2.6	Knickerbocker Substation	\$0	
	2.7	Marcy Substation	\$0	
	2.8	Substation Interconnections	\$4,378	
		Subtotal (2)	\$55,107	
		Total (1+2)	\$260,346	
		Contractors Mark-up (15% of Total 1+2)	\$39,052	
		Total Direct Cost (A)	\$299,398	
	3	Technical Services Costs		
	3.1	Contractor Mobilization / Demobilization	\$2,603	
st	3.2	Project Management, Material Handling & Amenities	\$18,440	
ŭ	3.3	Engineering	\$17,327	
Indirect Cost	3.4	Testing & Commissioning	\$1,435	
ndi	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$15,672	
-	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919	
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,865	
		Total Indirect Cost (3)	\$72,262	
		Subtotal Project Cost (B=A+3) 2017 \$	\$371,660	
	4	Network Upgrade Facilities (NUF)	ćo	
	4.1	NUF proposed as element of the Project	\$0	
	4.2	NUF identified during Evaluation	\$0 \$0	
Subtotal NUF Cost (C)			\$0	
Total Project Cost (B+C) 2017 \$			\$371,660	
		Total Project Cost 2018 \$	\$382,810	

Client:	NYISO			
Project:	AC Transmission Project Evaluation	SUBSTATION ENGINEERING		
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4.2.3. **T025 NAT/NYPA Segment A + 765kv**

	NY Power Authority and North American Transmission (T025)				
		Description	Total Amount (In		
		Description	thousand \$)		
	1	Transmission Lines	thousand \$1		
	1.1	Clearing & Access	\$54,770		
	1.2	Foundations	\$35,794		
	1.3	Structures	\$67,800		
	1.4	Conductor, Shieldwire and OPGW	\$37,454		
	1.5	Insulators, Fitting and Hardwares	\$13,068		
		Subtotal (1)	\$208,887		
	2	Substations	-		
st	2.1	Rotterdam Substation	\$46,629		
Direct Cost	2.2	Edic Substation	\$2,153		
lect	2.3	Princetown Substation	\$12,713		
∣ਾਂ	2.4	New Scotland Substation	\$0		
	2.5	Porter Substation	\$546		
	2.6	Knickerbocker Substation	\$67,167		
	2.7	Marcy Substation	\$17,553		
	2.8	Substation Interconnections	\$8,301		
		Subtotal (2)	\$155,062		
		Total (1+2)	\$363,949		
		Contractors Mark-up (15% of Total 1+2)	\$54,592		
		Total Direct Cost (A)	\$418,541		
	3	Technical Services Costs			
	3.1	Contractor Mobilization / Demobilization	\$3,639		
st	3.2	Project Management, Material Handling & Amenities	\$20,427		
<u> </u>	3.3	Engineering	\$26,178		
Indirect Cost	3.4	Testing & Commissioning	\$3,826		
ndir	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$28,303		
-	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919		
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$9,589		
		Total Indirect Cost (3)	\$100,882		
Subtotal Project Cost (B=A+3) 2017 \$			\$519,424		
	4	Network Upgrade Facilities (NUF)			
	4.1	NUF proposed as element of the Project (Marcy and Edic Terminals)	\$7,727		
	4.2	NUF identified during Evaluation (765kV Corona Mitigation)	\$116,005		
		Subtotal NUF Cost (C)	\$123,731		
		Total Project Cost (B+C) 2017 \$	\$643,155		
		Total Project Cost 2018 \$	\$662,450		

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4.2.4. T026 NAT/NYPA Segment A Base

	NY Power Authority and North American Transmission (T026)			
			Total	
		Description	Amount (In	
			thousand \$)	
	1	Transmission Lines		
	1.1	Clearing & Access	\$50,021	
	1.2	Foundations	\$23,713	
	1.3	Structures	\$60,645	
	1.4	Conductor, Shiedwire and OPGW	\$35,492	
	1.5	Insulators, Fitting and Hardwares	\$11,907	
		Subtotal (1)	\$181,777	
	2	Substations		
ost	2.1	Rotterdam Substation	\$47,340	
Oirect Cost	2.2	Edic Substation	\$2,153	
rec	2.3	Princetown Substation	\$0	
🗖	2.4	New Scotland Substation	\$5,264	
	2.5	Porter Substation	\$546	
	2.6	Knickerbocker Substation	\$0	
	2.7	Marcy Substation	\$0	
	2.8	Substation Interconnections	\$8,301	
		Subtotal (2)	\$63,603	
		Total (1+2)	\$245,381	
		Contractors Mark-up (15% of Total 1+2)	\$36,807	
		Total Direct Cost (A)	\$282,188	
	3	Technical Services Costs		
	3.1	Contractor Mobilization / Demobilization	\$2,454	
st	3.2	Project Management, Material Handling & Amenities	\$18,075	
8	3.3	Engineering	\$16,556	
Indirect Cost	3.4	Testing & Commissioning	\$1,498	
اق	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$19,749	
=	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919	
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,920	
		Total Indirect Cost (3)	\$75,169	
		Subtotal Project Cost (B=A+3) 2017 \$	\$357,357	
	4	Network Upgrade Facilities (NUF)		
	4.1	NUF proposed as element of the Project (Marcy and Edic Terminals)	\$7,727	
	4.2	NUF identified during Evaluation	\$0	
		Subtotal NUF Cost (C)	\$7,727	
		Total Project Cost (B+C) 2017 \$	\$365,084	
		Total Dusings Cout 2010 6	\$276.026	
		Total Project Cost 2018 \$	\$376,036	

Client:	NYISO		
Project:	AC Transmission Project Evaluation	SUBSTATION ENGINEERING	
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4.2.5. T027 NAT/NYPA Segment A Double Circuit

	NY Power Authority and North American Transmission (T027)			
		Description	Amount (In	
			thousand \$)	
	1	Transmission Lines		
	1.1	Clearing & Access	\$56,801	
	1.2	Foundations	\$31,116	
	1.3	Structures	\$106,166	
	1.4	Conductor, Shiedwire and OPGW	\$62,279	
	1.5	Insulators, Fitting and Hardwares	\$26,553	
		Subtotal (1)	\$282,915	
	2	Substations		
ost	2.1	Rotterdam Substation	\$47,340	
Direct Cost	2.2	Edic Substation	\$5,333	
l Se	2.3	Princetown Substation	\$29,872	
Ē	2.4	New Scotland Substation	\$7,717	
	2.5	Porter Substation	\$546	
	2.6	Knickerbocker Substation	\$0	
	2.7	Marcy Substation	\$0	
	2.8	Substation Interconnections	\$8,301	
		Subtotal (2)	\$99,109	
		Total (1+2)	\$382,023	
		Contractors Mark-up (15% of Total 1+2)	\$57,303	
		Total Direct Cost (A)	\$439,327	
	3	Technical Services Costs		
	3.1	Contractor Mobilization / Demobilization	\$3,820	
l ts	3.2	Project Management, Material Handling & Amenities	\$22,160	
Indirect Cost	3.3	Engineering	\$25,712	
ect	3.4	Testing & Commissioning	\$2,532	
μ	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$26,200	
=	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$17,838	
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$8,278	
		Total Indirect Cost (3)	\$106,541	
	Subtotal Project Cost (B=A+3) 2017 \$			
	4	Network Upgrade Facilities (NUF)		
	4.1	NUF proposed as element of the Project (Marcy and Edic Terminals)	\$7,727	
	4.2	NUF identified during Evaluation	\$0	
		Subtotal NUF Cost (C)	\$7,727	
			4	
		Total Project Cost (B+C) 2017 \$	\$553,594	
		Total Project Cost 2018 \$	\$570,202	

Client:	NYISO		
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4.2.6. T028 NAT/NYPA Segment A Enhanced

Total Amount (In thousand 5)		NY Power Authority and North American Transmission (T028)			
1 Transmission Lines				Total	
1 Transmission Lines 1.1 Clearing & Access \$50,021 1.2 Foundations \$23,713 1.3 Structures \$60,645 1.4 Conductor, Shiedwire and OPGW \$35,494 1.5 Insulators, Fitting and Hardwares \$11,907 \$2 Substations \$11,907 \$2 Edic Substation \$47,340 \$2.1 Rotterdam Substation \$47,340 \$2.2 Edic Substation \$12,718 \$2.3 Princetown Substation \$12,718 \$2.4 New Scotland Substation \$52,646 \$2.5 Porter Substation \$53,264 \$2.5 Porter Substation \$53,264 \$2.6 Knickerbocker Substation \$50,264 \$2.6 Knickerbocker Substation \$50,275 \$2.7 Marcy Substation \$50,27 Marcy Substation \$60 \$2.8 Substation Interconnections \$8,301 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,322 \$76,3			Description	Amount (In	
1.1 Clearing & Access \$50,021				thousand \$)	
1.2 Foundations \$23,713 1.3 Structures \$60,645 1.4 Conductor, Shiedwire and OPGW \$35,494 1.5 Insulators, Fitting and Hardwares \$11,907 2 Substations \$11,907 2 Substations \$47,340 2.1 Rotterdam Substation \$2,153 2.2 Edic Substation \$12,718 2.3 Princetown Substation \$12,718 2.4 New Scotland Substation \$5,264 2.5 Porter Substation \$5,264 2.6 Knickerbocker Substation \$5,264 2.7 Marcy Substation \$50 2.8 Substation Interconnections \$8,301 2.8 Substation Interconnections \$8,301 Contractors Mark-up (15% of Total 1+2) \$38,715 Total Operation \$2,581 3 Technical Services Costs \$3,10 3 Technical Services Costs \$3,10 3 Technical Services Costs \$3,10 3 Technical Services Cost \$1,676 4 Testing & Commissioning \$1,7676 5 Total Indirect Cost (3) \$77,961 5 Total Indirect Cost (6) \$7,727 4 Network Upgrade Facilities (NUF) \$1,677 4 Nuf proposed as element of the Project (Marcy and Edic Terminals) \$7,727 5 Total Project Cost (B+C) 2017 \$1,676 5 Total Project Cost (B+C) 2017		1			
1.3 Structures \$60,645 1.4 Conductor, Shiedwire and OPGW \$35,494 1.5 Insulators, Fitting and Hardwares \$11,907 2 Substations \$11,907 2 Substation \$47,340 2.1 Rotterdam Substation \$2,153 2.3 Princetown Substation \$2,2153 2.4 New Scotland Substation \$55,264 2.5 Porter Substation \$55,264 2.6 Knickerbocker Substation \$50,275 2.7 Marcy Substation \$50,275 2.8 Substation Interconnections \$38,301 2.8 Substation Interconnections \$38,301 Contractors Mark-up (15% of Total 1+2) \$338,715 3 Technical Services Costs \$11,007 3 Technical Services Costs \$12,007 3 Technical Services Costs \$13,245 3 Technical Services Costs \$13,245 3 Technical Services Costs \$13,345 4 Testing & Commissioning \$1,815 5 Total Indirect Cost (3) \$1,815 5 Total Indirect Cost (3) \$1,815 5		1.1	Clearing & Access		
1.4 Conductor, Shiedwire and OPGW \$33,494 1.5 Insulators, Fitting and Hardwares \$11,907		1.2	Foundations	\$23,713	
1.5 Insulators, Fitting and Hardwares \$11,907		1.3	Structures	\$60,645	
Substations \$47,340		1.4	Conductor, Shiedwire and OPGW	\$35,494	
2 Substations \$47,340 \$2.1 Rotterdam Substation \$47,340 \$2.2 Edic Substation \$2,153 \$2.3 Princetown Substation \$51,2718 \$2.3 Princetown Substation \$52,644 \$2.5 Porter Substation \$55,664 \$2.6 Knickerbocker Substation \$50 \$2.8 Substation Interconnections \$8,301 \$2.8 Substation Interconnections \$8,301 \$2.8 Substation Interconnections \$38,301 \$2.8 Substation Interconnections \$38,301 \$2.8 Substation Interconnections \$38,301 \$3.1 Contractor Mark-up (15% of Total 1+2) \$38,715 \$3.1 Contractor Mobilization \$20,521 \$3.2 Project Management, Material Handling & Amenities \$18,345 \$3.3 Engineering \$17,676 \$3.4 Testing & Commissioning \$1,815 \$3.5 Permitting, Real Estate, Sales Tax and Additional Costs \$20,529 \$3.6 Compensation for use of NYPA Structures (1 Ckt.) \$8,919 \$3.7 Legal, Env. Lisc. & Permit and Env. Mitigation \$8,096 Total Indirect Cost (3) \$77,961 \$3.7 Legal, Env. Lisc. & Permit and Env. Mitigation \$3.7,7961 \$3.7 Subtotal Project Cost (B=A+3) 2017 \$3.7,727 \$4.0 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 \$4.2 NUF identified during Evaluation \$9.0 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.82,505 \$3.8		1.5	Insulators, Fitting and Hardwares	\$11,907	
2.1 Rotterdam Substation \$47,340			Subtotal (1)	\$181,780	
2.2 Edic Substation \$2,153			Substations		
2.5 Porter Substation \$5546	ost	2.1	Rotterdam Substation		
2.5 Porter Substation \$5546	ŭ	2.2	Edic Substation	\$2,153	
2.5 Porter Substation \$5546	e	2.3	Princetown Substation	\$12,718	
2.6 Knickerbocker Substation \$0		2.4	New Scotland Substation	\$5,264	
2.7 Marcy Substation \$0 \$2.8 Substation Interconnections \$8,301		2.5	Porter Substation	\$546	
2.8 Substation Interconnections \$8,301		2.6	Knickerbocker Substation	\$0	
Subtotal (2) \$76,322		2.7	Marcy Substation	\$0	
Total (1+2) \$258,101		2.8	Substation Interconnections	\$8,301	
Contractors Mark-up (15% of Total 1+2) \$38,715			Subtotal (2)		
Total Direct Cost (A) \$296,817 3 Technical Services Costs 3.1 Contractor Mobilization / Demobilization \$2,581 3.2 Project Management, Material Handling & Amenities \$18,345 3.3 Engineering \$17,676 3.4 Testing & Commissioning \$1,815 3.5 Permitting, Real Estate, Sales Tax and Additional Costs \$20,529 3.6 Compensation for use of NYPA Structures (1 Ckt.) \$8,919 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation \$8,096 Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$90 Subtotal NUF Cost (C) \$7,727			` ,	\$258,101	
3 Technical Services Costs 3.1 Contractor Mobilization / Demobilization 3.2 Project Management, Material Handling & Amenities 3.3 Engineering 3.4 Testing & Commissioning 3.5 Permitting, Real Estate, Sales Tax and Additional Costs 3.6 Compensation for use of NYPA Structures (1 Ckt.) 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation Total Indirect Cost (3) Subtotal Project Cost (B=A+3) 2017 \$ 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) 4.2 NUF identified during Evaluation Subtotal NUF Cost (C) Total Project Cost (B+C) 2017 \$ \$382,505			Contractors Mark-up (15% of Total 1+2)	\$38,715	
3.1 Contractor Mobilization / Demobilization \$2,581 3.2 Project Management, Material Handling & Amenities \$18,345 3.3 Engineering \$17,676 3.4 Testing & Commissioning \$1,815 3.5 Permitting, Real Estate, Sales Tax and Additional Costs \$20,529 3.6 Compensation for use of NYPA Structures (1 Ckt.) \$8,919 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation \$8,096 Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727			Total Direct Cost (A)	\$296,817	
3.2 Project Management, Material Handling & Amenities \$18,345 3.3 Engineering \$17,676 3.4 Testing & Commissioning \$1,815 3.5 Permitting, Real Estate, Sales Tax and Additional Costs \$20,529 3.6 Compensation for use of NYPA Structures (1 Ckt.) \$8,919 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation \$8,096 Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727		3			
3.3 Engineering \$17,676 3.4 Testing & Commissioning \$1,815 3.5 Permitting, Real Estate, Sales Tax and Additional Costs \$20,529 3.6 Compensation for use of NYPA Structures (1 Ckt.) \$8,919 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation \$8,096 Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727					
3.6 Compensation for use of NYPA Structures (1 Ckt.) 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727	l t				
3.6 Compensation for use of NYPA Structures (1 Ckt.) 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727	8				
3.6 Compensation for use of NYPA Structures (1 Ckt.) 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727	ect	3.4	, ,		
3.6 Compensation for use of NYPA Structures (1 Ckt.) 3.7 Legal, Env. Lisc. & Permit and Env. Mitigation Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727	jg				
Total Indirect Cost (3) \$77,961 Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727 Total Project Cost (B+C) 2017 \$ \$382,505	=	3.6			
Subtotal Project Cost (B=A+3) 2017 \$ \$374,778 4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727 Total Project Cost (B+C) 2017 \$ \$382,505		3.7			
4 Network Upgrade Facilities (NUF) 4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727 Total Project Cost (B+C) 2017 \$ \$382,505					
4.1 NUF proposed as element of the Project (Marcy and Edic Terminals) \$7,727 4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727 Total Project Cost (B+C) 2017 \$ \$382,505				\$374,778	
4.2 NUF identified during Evaluation \$0 Subtotal NUF Cost (C) \$7,727 Total Project Cost (B+C) 2017 \$ \$382,505					
Subtotal NUF Cost (C) \$7,727 Total Project Cost (B+C) 2017 \$ \$382,505				·	
Total Project Cost (B+C) 2017 \$ \$382,505		4.2		, -	
			Subtotal NUF Cost (C)	\$7,727	
			Total Project Cost (B+C) 2017 \$	\$382,505	
			Total Project Cost 2018 \$		

Client:	NYISO	SECO SUBSTATION ENGINEERING	
Project:	AC Transmission Project Evaluation		
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4.2.7. **T031 ITC Segment A**

		ITC (T031)	
		` ,	Total
		Description	Amount (In
		·	thousand \$)
	1	Transmission Lines	• •
	1.1	Clearing & Access	\$53,084
	1.2	Foundations	\$43,503
	1.3	Structures	\$80,620
	1.4	Conductor, Shiedwire and OPGW	\$41,525
	1.5	Insulators, Fitting and Hardwares	\$18,615
		Subtotal (1)	\$237,347
	2	Substations	
st	2.1	Rotterdam Substation	\$19,805
ပ္သ	2.2	Edic Substation	\$2,185
Direct Cost	2.3	Princetown Substation	\$27,974
ä	2.4	New Scotland Substation	\$3,615
	2.5	Porter Substation	\$546
	2.6	Knickerbocker Substation	\$0
	2.7	Marcy Substation	\$0
	2.8	Substation Interconnections	\$8,383
		Subtotal (2)	\$62,507
		Total (1+2)	\$299,855
		Contractors Mark-up (15% of Total 1+2)	\$44,978
		Total Direct Cost (A)	\$344,833
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,999
st	3.2	Project Management, Material Handling & Amenities	\$18,925
Indirect Cost	3.3	Engineering	\$19,832
ect	3.4	Testing & Commissioning	\$1,560
ndii	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$20,688
_	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,941
		Total Indirect Cost (3)	\$80,864
	_	Subtotal Project Cost (B=A+3) 2017 \$	\$425,697
	4	Network Upgrade Facilities (NUF)	- ر
	4.1	NUF proposed as element of the Project	\$0
	4.2	NUF identified during Evaluation	\$0
		Subtotal NUF Cost (C)	\$0
		Total Project Cost (B+C) 2017 \$	\$425,697
		Total Project Cost 2018 \$	\$438,468

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Segment B Proposals

4.2.8. T019 NGRID/Transco Segment B

	National Grid and NY Transco (T019)				
	· · · · · · · · · · · · · · · · · · ·				
		Description	Amount (In		
			thousand \$)		
	1	Transmission Lines			
	1.1	Clearing & Access	\$34,641		
	1.2	Foundations	\$44,405		
	1.3	Structures	\$56,279		
	1.4	Conductor, Shiedwire and OPGW	\$30,070		
	1.5	Insulators, Fitting and Hardwares	\$11,200		
		Subtotal (1)	\$176,595		
ost	2	Substations			
Direct Cost	2.1	Knickerbocker Substation	\$26,306		
rec	2.2	East Greenbush Substation	\$61		
Ξ	2.3	Schodack Substation	\$2,226		
	2.4	Churchtown Substation	\$14,616		
	2.5	Pleasant Valley Substation	\$6,939		
	2.6	Substation Interconnections	\$5,534		
		Subtotal (2)	\$55,682		
		Total (1+2)	\$232,277		
		Contractors Mark-up (15% of Total 1+2)	\$34,842		
		Total Direct Cost (A)	\$267,118		
	3	Technical Services Costs			
	3.1	Contractor Mobilization / Demobilization	\$2,323		
Cost	3.2	Project Management, Material Handling & Amenities	\$16,172		
Indirect Cost	3.3	Engineering	\$15,527		
lire	3.4	Testing & Commissioning	\$1,324		
<u> </u>	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$16,982		
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,428		
		Total Indirect Cost (3)	\$59,755		
		Subtotal Project Cost (B=A+3) 2017 \$	\$326,874		
	4	Network Upgrade Facilities (NUF)			
		NUF proposed as element of the Project (Fishkill and New Scotland	A		
	4.1	Terminals)	\$1,085		
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417 \$5,502		
	Subtotal NUF Cost (C)				
	Total Project Cost (B+C) 2017 \$				
	. 1				
		Total Project Cost 2018 \$	\$342,347		

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4.2.9. T022 NextEra Segment B

	NextEra Energy (T022)			
		Description	Amount (In	
			thousand \$)	
	1	Transmission Lines		
	1.1	Clearing & Access	\$33,783	
	1.2	Foundations	\$17,271	
	1.3	Structures	\$58,961	
	1.4	Conductor, Shiedwire and OPGW	\$25,925	
	1.5	Insulators, Fitting and Hardwares	\$9,609	
		Subtotal (1)	\$145,550	
ost	2	Substations		
Direct Cost	2.1	Knickerbocker Substation	\$15,110	
rec	2.2	East Greenbush Substation	\$61	
∣≔	2.3	Schodack Substation	\$0	
	2.4	Churchtown Substation	\$14,897	
	2.5	Pleasant Valley Substation	\$2,798	
	2.6	Substation Interconnections	\$7,272	
		Subtotal (2)	\$40,138	
		Total (1+2)	\$185,688	
		Contractors Mark-up (15% of Total 1+2)	\$27,853	
		Total Direct Cost (A)	\$213,542	
	3	Technical Services Costs		
	3.1	Contractor Mobilization / Demobilization	\$1,857	
Indirect Cost	3.2	Project Management, Material Handling & Amenities	\$15,258	
t t	3.3	Engineering	\$12,281	
l ä	3.4	Testing & Commissioning	\$920	
=	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$10,584	
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628	
		Total Indirect Cost (3)	\$48,528	
		Subtotal Project Cost (B=A+3) 2017 \$	\$262,069	
	4	Network Upgrade Facilities (NUF)		
	4.1	NUF proposed as element of the Project	\$0	
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417 \$4,417	
Subtotal NUF Cost (C)				
		Total Project Cost (B+C) 2017 \$	\$266,486	
	. 1			
		Total Project Cost 2018 \$	\$274,481	

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4.2.10. T023 NextEra Segment B – Alt

	NextEra Energy (T023)			
			Total	
	Description			
			thousand \$)	
	1	Transmission Lines		
	1.1	Clearing & Access	\$34,215	
	1.2	Foundations	\$21,257	
	1.3	Structures	\$67,904	
	1.4	Conductor, Shiedwire and OPGW	\$30,529	
	1.5	Insulators, Fitting and Hardwares	\$11,349	
		Subtotal (1)	\$165,255	
ost	2	Substations		
Direct Cost	2.1	Knickerbocker Substation	\$15,110	
Lec	2.2	East Greenbush Substation	\$61	
Ē	2.3	Schodack Substation	\$0	
	2.4	Churchtown Substation	\$13,040	
	2.5	Pleasant Valley Substation	\$2,798	
	2.6	Substation Interconnections	\$6,473	
		Subtotal (2)	\$37,482	
		Total (1+2)	\$202,736	
		Contractors Mark-up (15% of Total 1+2)	\$30,410	
		Total Direct Cost (A)	\$233,147	
	3	Technical Services Costs		
	3.1	Contractor Mobilization / Demobilization	\$2,027	
Indirect Cost	3.2	Project Management, Material Handling & Amenities	\$16,697	
ct C	3.3	Engineering	\$13,253	
ire	3.4	Testing & Commissioning	\$874	
lnd	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$12,954	
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628	
		Total Indirect Cost (3)	\$53,433	
		Subtotal Project Cost (B=A+3) 2017 \$ Network Upgrade Facilities (NUF)	\$286,580	
	4			
	4.1	NUF proposed as element of the Project	\$0	
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417	
	Subtotal NUF Cost (C)			
Total Project Cost (B+C) 2017 \$			\$290,997	
	Total Project Cost 2018 \$ \$299,727			

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4.2.11. T029 NAT/NYPA Segment B Base

	NY Power Authority and North American Transmission (T029)			
		Description	Total Amount (In thousand \$)	
	1	Transmission Lines		
	1.1	Clearing & Access	\$33,958	
	1.2	Foundations	\$17,769	
	1.3	Structures	\$52,916	
	1.4	Conductor, Shiedwire and OPGW	\$30,069	
	1.5	Insulators, Fitting and Hardwares	\$11,442	
		Subtotal (1)	\$146,154	
st	2	Substations		
8	2.1	Knickerbocker Substation	\$14,982	
Direct Cost	2.2	East Greenbush Substation	\$61	
□	2.3	Schodack Substation	\$2,226	
	2.4	Churchtown Substation	\$15,925	
	2.5	Pleasant Valley Substation	\$2,798	
	2.6	Substation Interconnections	\$5,495	
		Subtotal (2)	\$41,487	
		Total (1+2)	\$187,641	
		Contractors Mark-up (15% of Total 1+2)	\$28,146	
		Total Direct Cost (A)	\$215,787	
	3	Technical Services Costs		
	3.1	Contractor Mobilization / Demobilization	\$1,876	
ost	3.2	Project Management, Material Handling & Amenities	\$15,334	
Indirect Cost	3.3	Engineering	\$12,503	
irec	3.4	Testing & Commissioning	\$973	
luq	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$14,135	
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628	
		Total Indirect Cost (3)	\$52,449	
		Subtotal Project Cost (B=A+3) 2017 \$	\$268,236	
	4	Network Upgrade Facilities (NUF)		
		NUF proposed as element of the Project (Middletown Line and		
	4.1	Terminal)	\$16,261	
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417	
		Subtotal NUF Cost (C)	\$20,678	
		Total Project Cost (B+C) 2017 \$	\$288,914	
		Total Project Cost 2018 \$	\$297,581	
		Total Floject Cost 2016 5	7237,301	

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4.2.12. T030 NAT/NYPA Segment B Enhanced

NY Power Authority and North American Transmission (T030)					
	Description				
	bescription .				
	1	Transmission Lines			
	1.1	Clearing & Access	\$34,378		
	1.2	Foundations	\$18,131		
	1.3	Structures	\$56,775		
	1.4	Conductor, Shiedwire and OPGW	\$35,969		
	1.5	Insulators, Fitting and Hardwares	\$11,553		
ļ		Subtotal (1)	\$156,807		
ost	2	Substations			
τÇ	2.1	Knickerbocker Substation	\$14,982		
Direct Cost	2.2	East Greenbush Substation	\$61		
Ö	2.3	Schodack Substation	\$2,226		
	2.4	Churchtown Substation	\$16,010		
	2.5	Pleasant Valley Substation	\$2,778		
	2.6	Substation Interconnections	\$6,312		
		Subtotal (2)	\$42,369		
		Total (1+2)	\$199,176		
		Contractors Mark-up (15% of Total 1+2)	\$29,876		
		Total Direct Cost (A)	\$229,052		
	3	Technical Services Costs			
	3.1	Contractor Mobilization / Demobilization	\$1,992		
ost	3.2	Project Management, Material Handling & Amenities	\$15,576		
Indirect Cost	3.3	Engineering	\$13,164		
ire	3.4	Testing & Commissioning	\$972		
<u>lu</u>	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$14,389		
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628		
		Total Indirect Cost (3)	\$53,721		
		Subtotal Project Cost (B=A+3) 2017 \$	\$282,773		
	4	Network Upgrade Facilities (NUF)			
	4.1	NUF proposed as element of the Project (Middletown Line and Terminal)	\$16,261		
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417		
		Subtotal NUF Cost (C)	\$20,678		
	Total Project Cost (B+C) 2017 \$				
			4		
		Total Project Cost 2018 \$	\$312,555		

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4.2.13. **T032 ITC Segment B**

		ITC (T032)		
		Description	Total Amount (In thousand \$)	
	1	Transmission Lines		
	1.1	Clearing & Access	\$35,253	
	1.2	Foundations	\$82,888	
	1.3	Structures	\$67,205	
	1.4	Conductor, Shiedwire and OPGW	\$33,769	
	1.5	Insulators, Fitting and Hardwares	\$16,154	
		Subtotal (1)	\$235,269	
ıst	2	Substations		
Direct Cost	2.1	Knickerbocker Substation	\$21,112	
rect	2.2	East Greenbush Substation	\$0	
Ö	2.3	Schodack Substation	\$0	
	2.4	Churchtown Substation	\$1,977	
	2.5	Pleasant Valley Substation	\$3,101	
	2.6	Substation Interconnections	\$5,764	
		Subtotal (2)	\$31,954	
		Total (1+2)	\$267,224	
		Contractors Mark-up (15% of Total 1+2)	\$40,084	
		Total Direct Cost (A)	\$307,307	
	3	Technical Services Costs		
	3.1	Contractor Mobilization / Demobilization	\$2,672	
ndirect Cost	3.2	Project Management, Material Handling & Amenities	\$18,202	
ಕ	3.3	Engineering	\$16,986	
dire	3.4	Testing & Commissioning	\$755	
<u>lu</u>	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$16,833	
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628	
		Total Indirect Cost (3)	\$63,075	
		Subtotal Project Cost (B=A+3) 2017 \$	\$370,382	
	4	Network Upgrade Facilities (NUF)		
	4.1	NUF proposed as element of the Project	\$0 \$4,417	
	4.2 NUF identified by System Impact Study (Cricket Valley Line Upgrade)			
		Subtotal NUF Cost (C)	\$4,417	
	Total Project Cost (B+C) 2017 \$ \$374,799			
		Total Project Cost 2018 \$	\$386,043	

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4.3. Risk

The review team completed an evaluation of the potential risks associated with the proposals and has summarized the significant risks, including those previously identified by each Developer. The review team's evaluation was based on the team's collective experience with transmission line and substation projects in New York State.

The significant drivers to the project risks considered were:

- Article VII review approval process and potential environmental issues
- Procurement of major equipment
- Real Estate acquisition
- Construction

The most significant risks are summarized below. The review team also recommends that a Risk Management Program be implemented in the execution of the project or projects selected by the NYISO. A Risk Management Program will highlight items such as safety management, materials management, construction operations, outage planning, QA/QC program, field inspection, and environmental controls that are critical in identifying both risk areas and specific mitigation strategies. It is also important that Risk Management become a living project component that is constantly monitored and updated as the project progresses.

4.3.1. Common Risks

The risks common to all proposals are summarized below. The costs for these risks are adequately covered by the project contingency:

#	Risk Title	Description	Comment
1	Article VII Certificate	Article VII review approval process could take longer than estimated in schedule for a variety of reasons (i.e., additional special studies requested by involved agencies, lack of stakeholder consensus).	Developer needs early outreach with all stakeholders and to prepare a comprehensive application. Developer's experience with Article VII process will be essential.
2	Other environmental approvals	Federal agency and other approvals could take longer than the state Article VII process. This	Developer needs early outreach with Federal agencies and others to prepare

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		could become more likely if cutbacks of funding to regulatory agencies affect employee staffing.	comprehensive applications and obtain approvals in parallel with Article VII process.
3	Public Opposition	If local groups or citizens oppose the project, it could cause significant delays especially if opposition results in litigation.	Developer needs early outreach to solicit public involvement, incorporate public concerns during planning stage before project execution, build mitigation into design, and foster community buy-in.
4	EM&CP Approval	EM&CP approval process could take longer than estimated by the Developer in schedule.	Developer needs to prepare a comprehensive EM&CP that will meet regulatory agency requirements. Developer's experience with DPS, DEC, Ag. & Markets, and other agency requirements will be essential.
5	Environmental Study Findings	Environmental studies could find critical habitat, wetlands, agricultural lands, rare, threatened or endangered species, cultural or archeological sites, etc. that could require re-routing of lines or special conditions such as seasonal restriction on construction. The time of year when studies can be conducted could also affect project schedule. Access to structures in Black Creek Marsh may require design or construction modifications.	Studies need to be scheduled and conducted early in the process to ensure design and the EM&CP adequately minimizes, mitigates or avoids environmental impacts.

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6	Unknown environmental conditions discovered during construction	During construction, the Developer could encounter previously unidentified issues, such as contaminated soil, archeological remains, rare, threatened or endangered species, unidentified utilities, etc.	Environmental monitor will be on-site during construction. Such findings could require relocating and redesigning structures resulting in construction delays.
7	Violation of environmental requirements during construction	Construction activities could result in violations of environmental permits/approvals due to inadequate control measures or not following plans (i.e., storm water discharges) resulting in stop work notice.	The risk can be mitigated by following Best Management Practices and ensure crews are adequately trained to implement EM&CP and other environmental permit/approval requirements.
8	Gas pipeline mitigation	Transmission line crossings and paralleling of natural gas pipelines may require grounding or other mitigation, and natural gas pipeline entities are increasingly aware of this issue and demanding mitigation to be installed by transmission utilities.	The cost of gas pipeline mitigation studies and mitigation requirements are relatively small compared to the overall project cost. The risk can be mitigated by a study to determine the exact location of gas pipeline(s) and recommend mitigation requirements.
9	Transmission line crossings	Crossing of other transmission and distribution lines: creates additional schedule risk, to the extent an outage needs to be scheduled; creates additional operating risk, to the extent a single event could remove both elements from services; and	This risk is mitigated by early identification of all necessary crossings. For example, this risk is best minimized during construction through frequent coordination with the existing transmission line owner and installation of protective netting and other protection prior to pulling sock line and conductor. This risk can be

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		creates cost risk to the extent unexpected costs such as raising, lowering, or relocating an existing line is required.	mitigated through the development of High Risk Evolution Plans for transmission crossings, which include, at a minimum, coordination with all involved utility owners, contractors, construction and project management planning sessions and a detailed schedule of events for crossing.
10	Highway, Rail Road & Navigable Waterway crossings	Crossing of Highways, Rail Roads, and Navigable Waterways creates additional risk to the project schedule and cost, depending on the requirements imposed during construction.	The risks can be mitigated by early identification of all necessary crossings. Prior to and during construction this risk is best minimized through frequent coordination with those responsible for the operation of the facilities being crossed. Develop High Risk Evolution Plans for all major highway, RR or waterway crossings which include at a minimum coordination with RR, flaggers, contractors, Local and state police / highway patrol, construction and project management planning sessions and a detailed schedule of events for crossing.
11	Material Shortages	Material and equipment shortages and delayed shipments.	The risks can be mitigated by proper quality assurance during engineering to insure adequate quantities ordered. Procurement with sufficient

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			period of float between scheduled deliveries from suppliers and when material is needed for construction and proactive monitoring and expediting.
12	Operational Issues	Need to maintain resources for emergency response for the life of the facility.	This risk can be mitigated by maintaining a local staff, contracting with emergency restoration provider in the project area, and entering into mutual assistance agreements with neighboring utilities.
13	Need for additional System Upgrade Facilities	Completion of the detailed studies, such as fault studies and protection coordination for the project, will normally be completed during the SIS, the Facilities Study and detailed engineering.	The system modifications proposed by the Developers may require replacement of breakers and protection equipment on the existing system. Additional thermal overloads may be identified.
14	Catastrophic HSE / Safety Event	High voltage transmission and substation work is inherently dangerous. Accidents that occur on projects of this nature frequently result in serious injury or fatality. Catastrophic safety events such as loss of life can result in extended work stoppages across all stages of the project.	This risk can be mitigated through a robust Project and Site Safety Program implementation. Project Orientations which verify training of ALL project personnel. Extensive Health, Safety and Environmental (HSE)management presence during construction to ensure compliance.

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15	Construction	Compliance with project	This risk can be mitigated by
	Quality Control	specifications and quality can be	detailed Quality
		compromised if installations are	Control/Quality Assurance
		not properly monitored. Structure	Plans during early planning
		misalignments, improper structure	stages and in a detailed Project
		framing, use of incorrect materials,	Execution Plan; ensuring
		etc. can result in re-work,	inspection processes are in
		unnecessary delays and project	place for all components of
		overruns. Larger and complex	construction; and considering
		projects that require greater	the utilization of third-party
		resources are more susceptible to	inspectors to ensure
		Quality Control Issues. If the	compliance.
		NYPSC cited a contractor as being	
		in non-compliance, the result can	
		be extended work stoppages.	
16	Change Order	Unresolved Change Orders may	This risk can be mitigated by
	Management -	result in delays to construction and	including detailed Change
	Construction	impact the schedule.	Order Management Plan and
	Impacts		process in the Project
			Execution Plan in order to
			mitigate potential delays.

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4.3.2. Project-Specific Risks

Summarized below are the review team's most significant risk findings specific to each proposal. This is not all inclusive but is intended to highlight those items that pose the most critical risks to the projects' completion.

4.3.2.1. **SEGMENT A**:

T018	T018 – New York Energy Solution Segment A - National Grid/Transco				
#	Risk Title	Description	Comment		
1	Design Concern - New Scotland Substation (National Grid Owned)	A significant issue is the lack of space in Control House #3i.e., the most up-to-date building of the three existing control houses.	To keep the new 345kV panels with the existing panel line up will likely require expanding the building to the east where the cable trench entrances and a communication tower are located. (While the Developer did not include expanding the control house in its estimate, the review team's independent cost estimate includes this scope of work.)		
2	Obtaining Site Control and Property Acquisition	National Grid owns all property required for new facilities. De minimis property may need to be acquired for access and construction marshalling yards.	National Grid's control of the property obviates any significant issue. Property will ultimately be transferred to the NY Transco.		
3	Design Concern - EMF	The existing corridor (345kV Lines #14 and #18, and 115kV Line #13) between Princetown Junction and New Scotland Substation is currently estimated to exceed NPSC guidelines for EMF levels. The proposed design improves the condition, but EMF levels are still	EMF levels will have to be addressed during detailed engineering and may result in purchasing EMF easements from property owners along the ROW between Princetown and New Scotland. (The review		

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		estimated to exceed the guidelines.	team's independent cost estimate includes the cost for additional EMF easements.) This is considered a critical risk for all Segment A proposals with exception of T027 (double circuit proposal).
4	Re-use of existing structures	During construction the Developer could discover that structures originally planned for re-use are in worse condition than expected or inadequate and require repair or replacement.	The Developer proposes reusing 92 structures on the double circuit Edic/Fraser and 230kV Line 30 beginning at Edic/Porter and continuing east for 12.6 miles. A cursory visual inspection indicate the structures are in good physical condition. Thorough inspection and analysis of existing structures is advisable prior to completing final design.
T021	. – Enterprise Line: S	Segment A - NextEra	
#	Risk Title	Description	Comment
1	Design Concern - New Scotland Substation (National Grid Owned)	A significant issue is the lack of space in Control House #3-i.e., the most up-to-date building of the three existing control houses.	To keep the new 345kV panels with the existing panel line up will likely require expanding the building to the east where the cable trench entrances and a communication tower are located. (While the Developer did not include expanding the control house in its estimate, the review team's independent cost estimate includes this scope of work.)

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2	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and construction marshalling yards. Additionally, Developer must procure property for Princetown substation.	Negotiations with the incumbent utility could result in potential cost and schedule implications. The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should be sufficient time making this a potential but low risk. The estimate contingency should be sufficient to cover potential increased costs which is considered a low probability. For Princetown substation, Developer has already obtained a purchase option on property for its proposed location.
3	Construction Concern – Use of Concrete Poles	Developer proposes using concrete poles for the majority of transmission line structures and has considered some of the concerns associated with transportation, public protection and community impact.	Developer needs to evaluate each proposed structure location during detailed engineering to verify delivery and installation feasibility, and develop a robust risk mitigation plan taking account of the project risks, planning and clear mitigation for problem areas. Issues encountered with delivery or installation of these poles may result in schedule delays and increased costs.

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4	Design Concern - EMF	The existing corridor (345kV Lines #14 and #18, and 115kV Line #13) between Princetown Junction and New Scotland Substation is currently estimated to exceed NPSC guidelines for EMF levels. The proposed design improves the condition, but EMF levels are still estimated to exceed the guidelines.	EMF levels will have to be addressed during detailed engineering and may result in purchasing EMF easements from property owners along the right-of-way between Princetown and New Scotland. (The review team's independent cost estimate includes the cost for additional EMF easements.) This is considered a critical risk for all Segment A proposals with exception of T027 (double circuit proposal).
5	Re-use of existing structures	During construction, the Developer could discover that structures originally planned for re-use are in worse condition than expected or inadequate and require repair or replacement.	The Developer proposes reusing 92 structures on the double circuit Edic/Fraser and 230kV Line 30 beginning at Edic/Porter and continuing east for 12.6 miles. A cursory visual inspection indicate the structures are in good physical condition. Thorough inspection and analysis of existing structures is advisable prior to completing final design.

T025	T025 – Segment A + 765 kV Proposal - North American Transmission/NYPA				
#	Risk Title	Description	Comment		
1	Design Concern -	Proposed substation layout is	Relocation of the existing gas		
	Rotterdam	directly over two existing gas	transmission lines is likely and		
	Substation	transmission lines and is likely to	could require relocating the		
	(National Grid	be resisted by the owner of that	substation and/or purchasing		
	Owned)	facility.	additional property. (The		
			review team's independent cost		

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			estimate includes the cost for relocating these gas transmission lines.)
2	Property Acquisition Concern - Princetown Substation	NAT/NYPA's proposed design for Princetown Substation appears to just fit within the existing National Grid ROW.	If the final design requires purchasing additional property it will likely be difficult and increase cost. (The review team's independent cost estimate does not include the cost for additional property/easements.) This is considered the highest risk for this proposal
3	Design Concern – Princetown Substation location (on National Grid Owned ROW)	Proposed substation is located close to existing homes and buildings. These property owners may oppose the siting of a substation near their property due to concerns with visual impact, noise, security lights, etc. Construction on ROW with existing lines will require coordination with incumbent utility to maintain clearances.	Public opposition to this site may result in delays associated with obtaining regulatory approvals and increased costs. An alternative design such as GIS or site may need to be identified such as NextEra proposed location midway between the Junction and Rotterdam which has adequate space and would not be as close to existing buildings or roads, minimizing the visual impact and possible opposition. Short term outages and/or temporary bypasses of existing lines may be required during construction.
4	Design Concern - Marcy 765kV Substation (NYPA Owned)	As proposed, the Developer's layout has a single span of conductors crossing the bus between the new 765kV breaker	A dropped conductor will trip out the south main bus as well as the bus between the new breaker and breaker 7202.

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		and the south main bus, and	
		between the new breaker and	
		breaker 7202.	
5	Design Concern -	A significant issue is the lack of	To keep the new 345kV panels
	New Scotland	space in Control House #3—i.e.,	with the existing panel line up
	Substation	the most up-to-date building of	will likely require expanding the
	(National Grid	the three existing control houses.	building to the east where the
	Owned)	the three existing control houses.	cable trench entrances and a
	Ownedy		communication tower are
			located. (While the Developer
			•
			did not include expanding the
			control house in its estimate,
			the review team's independent
			cost estimate includes this
			scope of work.)
6	Obtaining Site	Proposal utilizes existing ROW	Negotiations with the
	Control and	owned by National Grid.	incumbent utility could result in
	Property	,	potential cost and schedule
	Acquisition	De minimis property may need to	implications.
		be acquired for access and	
		construction marshalling yards.	The review team's schedule
			provides two years for
			negotiation and procurement
			of ROW beginning with the
			notice to proceed. This should
			be sufficient time making this a
			potential but low risk. The
			estimate contingency should be
			sufficient to cover potential
			increased costs which is
			considered a low probability.
7	Design Concern -	The existing corridor (345kV Lines	EMF levels will have to be
	EMF	#14 and #18, and 115kV Line #13)	addressed during detailed
		between Princetown Junction and	engineering and may result in
1		New Scotland Substation is	purchasing EMF easements

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		currently estimated to exceed NYS PSC guidelines for EMF levels. Additionally, conversion of the 345kV line between Marcy substation and proposed Knickerbocker substation to 765kV is estimated to likely increase EMF levels beyond NYPSC guidelines.	totaling approximately 76 acres from property owners along the ROW between Marcy and New Scotland. (The review team's independent cost estimate includes the cost for additional EMF easements.) This is considered a critical risk for all Segment A proposals with exception of T027 (double circuit proposal).
8	Public Opposition - 765 kV Transmission Line	New York State's only 765kV transmission line between Massena and Marcy was completed in 1975 amidst heavy public opposition. As such, it is highly likely that converting the 345kV line between Marcy substation and the proposed Knickerbocker substation will be controversial due increased EMF, noise from corona and increased structure heights, and result in delays associated with obtaining regulatory approvals and EMF easements likely based on public opposition.	This risk could be mitigated with a targeted and well-planned public outreach effort. However, negative public opposition may result in delays associated with the project's schedule and affect the project's cost and the ability to obtain required EMF easements.
9	Design Concern - 765 kV Transmission Line	The 345kV line between Marcy substation and the proposed Knickerbocker substation was designed and constructed to 765kV standards over 40 years ago.	Design clearances will have to be verified against current standards during detailed design. Also, the condition of insulators and hardware will have to be evaluated due to age. Changing out hardware due to age or modifications to

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			reduce corona could have significant cost and schedule implications. (The review team's independent cost estimate includes an allowance for potential remedial work that may be identified.)
10	Re-use of existing structures	During construction the Developer could discover that structures originally planned for re-use are in worse condition than expected or inadequate and require repair or replacement.	The Developer proposes reusing 92 structures on the double circuit Edic/Fraser and 230kV Line 30 beginning at Edic/Porter and continuing east for 12.6 miles. A cursory visual inspection indicate the structures are in good physical condition. Thorough inspection and analysis of existing structures is advisable prior to completing final design.

T026	T026 – Segment A Base Proposal - North American Transmission/NYPA				
#	Risk Title	Description	Comment		
1	Design Concern - Rotterdam Substation (National Grid Owned)	Proposed substation layout is directly over two existing gas transmission lines and is likely to be resisted by the owner of that facility.	Relocation of the existing gas transmission lines is likely and could require relocating the substation and/or purchasing additional property. (The review team's independent cost estimate includes the cost for relocating these gas transmission lines.)		

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2	Design Concern - New Scotland Substation (National Grid Owned)	A significant issue is the lack of space in Control House #3—i.e., the most up-to-date building of the three existing control houses.	To keep the new 345kV panels with the existing panel line up will likely require expanding the building to the east where the cable trench entrances and a communication tower are located. (While the Developer did not include expanding the control house in its estimate, the review team's independent cost estimate includes this scope of work.)
3	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and construction marshalling yards.	Negotiations with the incumbent utility could result in potential cost and schedule implications. The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should be sufficient time making this a potential but low risk. The estimated contingency should be sufficient to cover potential increased costs which is considered a low probability.
4	Design Concern - EMF	The existing corridor (345kV Lines #14 and #18, and 115kV Line #13) between Princetown Junction and New Scotland Substation is currently estimated to exceed NYS PSC guidelines for EMF levels. The proposed design improves the condition, but EMF levels are still	EMF levels will have to be addressed during detailed engineering and may result in purchasing EMF easements from property owners along the right-of-way between Princetown and New Scotland. (The review team's independent

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		estimated to exceed the	cost estimate includes the cost
		guidelines.	for additional EMF easements.)
			This is considered a critical risk
			for all Segment A proposals
			with exception of T027 (double
			circuit proposal).
5	Re-use of existing	During construction the Developer	The Developer proposes re-
	structures	could discover that structures	using 92 structures on the
		originally planned for re-use are in	double circuit Edic/Fraser and
		worse condition than expected or	230kV Line 30 beginning at
		inadequate and require repair or	Edic/Porter and continuing east
		replacement.	for 12.6 miles. A cursory visual
			inspection indicate the
			structures are in good physical
			condition. Thorough inspection
			and analysis of existing
			structures is advisable prior to
			completing final design.

T027	T027 – Segment A Double Circuit Proposal - North American Transmission/NYPA			
#	Risk Title	Description	Comment	
1	Design Concern - Rotterdam Substation (National Grid Owned)	Proposed substation layout is directly over two existing gas transmission lines and is likely to be resisted by the owner of that facility.	Relocation of the existing gas transmission lines is likely and could require relocating the substation and/or purchasing additional property. (The review team's independent cost estimate includes the cost for relocating these gas transmission lines.)	
2	Property Acquisition Concern -	NAT/NYPA's proposed design for Princetown Substation appears to just fit within the existing National	If required by the final design purchasing additional property will likely be difficult and	

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	Princetown Substation	Grid ROW.	increase cost. (The review team's independent cost
			estimate does not include the cost for additional
			property/easements.)
3	Design Concern – Princetown Substation location (on National Grid Owned ROW)	Proposed substation is located close to existing homes and buildings. These property owners may oppose the siting of a substation near their property due to concerns with visual impact, noise, security lights, etc. Construction on ROW with existing lines will require coordination with incumbent utility to maintain clearances.	Public opposition to this site may result in delays associated with obtaining regulatory approvals and increased costs. An alternative site may need to be identified such as NextEra proposed location midway between the Junction and Rotterdam which has adequate space and would not be as close to existing buildings or roads, minimizing the visual impact and possible opposition. Short term outages and/or temporary bypasses of existing lines may be required to during construction.
4	Design Concern - New Scotland Substation (National Grid Owned)	A significant issue is the lack of space in Control House #3—i.e., the most up-to-date building of the three existing control houses.	To keep the new 345kV panels with the existing panel line up will likely require expanding the building to the east where the cable trench entrances and a communication tower are located. (While the Developer did not include expanding the control house in its estimate, the review team's independent cost estimate includes this scope of work.)

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5	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and	Negotiations with the incumbent utility could result in potential cost and schedule implications.
		construction marshalling yards.	The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should be sufficient time making this a potential but low risk. The estimate contingency should be sufficient to cover potential increased costs which is considered a low probability.
6	Design Concern - EMF	Based on preliminary calculations provided by the Developer, it is possible that EMF design levels will be within NYPSC guidelines.	EMF levels will have to be confirmed during detailed engineering. It is anticipated that the double circuit alternative will reduce EMF levels to below NYS PSC guideline levels on the Princetown Junction to New Scotland corridor.
7	Re-use of existing structures	During construction the Developer could discover that structures originally planned for re-use are in worse condition than expected or inadequate and require repair or replacement.	The Developer proposes reusing 92 structures on the double circuit Edic/Fraser and 230kV Line 30 beginning at Edic/Porter and continuing east for 12.6 miles. A cursory visual inspection indicate the structures are in good physical condition. Thorough inspection and analysis of existing structures is advisable prior to

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	completing final design.

1028	5 – Segment A Ennar	nced Proposal - North American Tran	SIIIISSIUII/ INTPA
#	Risk Title	Description	Comment
1	Design Concern - Rotterdam Substation (National Grid Owned)	Proposed substation layout is directly over two existing gas transmission lines and is likely to be resisted by the owner of that facility.	Relocation of the existing gas transmission lines is likely and could require purchasing additional property. (The review team's independent cost estimate includes the cost for relocating these gas transmission lines.)
2	Property Acquisition Concern - Princetown Substation	NAT/NYPA's proposed design for Princetown Substation appears to just fit within the existing National Grid rights-of-way.	If required by the final design purchasing additional property will likely be difficult and increase cost. (The review team's independent cost estimate does not include the cost for additional property/easements.)
3	Design Concern – Princetown Substation location (on National Grid Owned ROW)	Proposed substation is located close to existing homes and buildings. These property owners may oppose the siting of a substation near their property due to concerns with visual impact, noise, security lights, etc. Construction on ROW with existing lines will require coordination with incumbent	Public opposition to this site may result in delays associated with obtaining regulatory approvals and increased costs. An alternative design such as GIS or site may need to be identified such as a new location midway between the Junction and Rotterdam which has adequate space and would

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		utility to maintain clearances.	not be as close to existing
			buildings or roads, minimizing
			the visual impact and possible
			opposition.
			Short term outages and/or
			temporary bypasses of existing
			lines may be required to during
			construction.
4	Design Concern -	A significant issue is the lack of	To keep the new 345kV panels
	New Scotland	space in Control House #3, the	with the existing panel line up
	Substation	most up-to-date building of the	will likely require expanding the
	(National Grid	three existing control houses.	building to the east where the
	Owned)		cable trench entrances and a
			communication tower are
			located. (While the Developer
			did not include expanding the
			control house in its estimate,
			the review team's independent
			cost estimate will include this
			scope of work.)
			, ,
5	Obtaining Site	Proposal utilizes existing ROW	Negotiations with the
	Control and	owned by National Grid.	incumbent utility could result in
	Property		potential cost and schedule
	Acquisition	De minimis property may need to	implications.
		be acquired for access and	
		construction marshalling yards.	The review team's schedule
			provides two years for
			negotiation and procurement
			of ROW beginning with the
			notice to proceed. This should
			be sufficient time making this a
			potential but low risk. The
			estimate contingency should be
			sufficient to cover potential
			increased costs which is
			considered a low probability.

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6	Design Concern -	The existing corridor (345kV Lines	EMF levels will have to be
	EMF	#14 and #18, and 115kV Line #13)	addressed during detailed
		between Princetown Junction and	engineering and may result in
		New Scotland Substation is	purchasing EMF easements
		currently estimated to exceed NYS	from property owners along
		PSC guidelines for EMF levels. The	the right-of-way between
		proposed design improves the	Princetown and New Scotland.
		condition, but EMF levels are still	(The review team's independent
		estimated to exceed the	cost estimate includes the cost
		guidelines.	for additional EMF easements.)
			This is considered a critical risk
			for all Segment A proposals
			with exception of T027 (double
			circuit proposal).
7	Re-use of existing	During construction the Developer	The Developer proposes re-
	structures	could discover that structures	using 92 structures on the
		originally planned for re-use are in	double circuit Edic/Fraser and
		worse condition than expected or	230kV Line 30 beginning at
		inadequate and require repair or	Edic/Porter and continuing east
		replacement.	for 12.6 miles. A cursory visual
			inspection indicate the
			structures are in good physical
			condition. Thorough inspection
			and analysis of existing
			structures is advisable prior to
			completing final design.

T031 – 16NYPP1-1A AC Transmission - ITC				
#	# Risk Title Description Comment		Comment	
1	Reliability	ITC proposes connecting a new	While this may be the simplest	
	Concern - New	345kV transmission line into New	arrangement, it also provides	
	Scotland	Scotland by adding a 345kV	the least amount of reliability.	
	Substation	terminal structure, circuit breaker	With this configuration, a failed	
	(National Grid	with disconnect switches	breaker or a bus fault will cause	

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	Overs and V		a loss of the following:
	Owned)	connected to the main bus.	a loss of the following:
			New 345kV line to Princetown
			345kV Line to Princetown
			(formally line14 to Edic),
			345kV Line 93 to Leeds,
			345kV Line 2 to Alps,
			Bank #2,
			Capacitor Banks #1 and #3.
			The review team recognizes
			that a failed breaker on any of
			the existing lines, capacitor
			banks or Bank #2 will also cause
			a similar loss to those stated.
			However, the proposed
			arrangement does not improve
			the reliability and will
			exacerbate the situation.
2	Design Concern -	A significant issue is the lack of	To keep the new 345kV panels
	New Scotland	space in Control House #3, the	with the existing panel line up
	Substation	most up-to-date building of the	will likely require expanding the
	(National Grid	three existing control houses.	building to the east where the
	Owned)		cable trench entrances and a
			communication tower are
			located. (While the Developer
			did not include expanding the
			control house in its estimate,
			the review team's independent
			cost estimate includes this
			scope of work.)
3	Design Concern -	Proposed substation layout is	Relocation of the existing gas
	Rotterdam	directly over an existing gas	transmission line is likely and
	Substation	transmission line and is likely to be	could require relocating the
	(National Grid	resisted by the owner of that	substation and/or purchasing
	Owned)	facility.	additional property. (The
			review team's independent cost
			estimate includes the cost for

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4	Reliability Concern - Rotterdam Substation (National Grid Owned)	ITC proposes a straight bus arrangement by installing two new 345kV T-line terminals with circuit breakers, disconnect switches, a 345kV tie breaker, and two 345kV - 230kV transformers. Each transformer will have a 230kV circuit breaker connected to the 230kV main bus.	relocating this gas transmission line.) With this configuration, and because the 230kV Lines 30 and 31 are eliminated, a failed 230kV breaker or a 230kV bus fault will cause a loss of the entire 230kV yard.
5	Property Acquisition Concern - Princetown Substation	ITC's proposed design for Princetown Substation will not fit within the existing National Grid ROW.	Purchasing additional property will likely be difficult and increase the cost of the project. (The review team's independent cost estimate includes the cost for additional property/easements.)
6	Design Concern – Princetown Substation location (on National Grid Owned ROW)	Proposed substation is located close to existing homes and buildings. These property owners may oppose the siting of a substation near their property due to concerns with visual impact, noise, security lights, etc. Construction on ROW with existing lines will require coordination with incumbent utility to maintain clearances.	Public opposition to this site may result in delays associated with obtaining regulatory approvals and increased costs. An alternative design such as GIS or site may need to be identified such as NextEra proposed location midway between the Junction and Rotterdam which has adequate space and would not be as close to existing buildings or roads, minimizing the visual impact and possible opposition. Outages and/or temporary

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			bypasses of existing lines will be required to during construction.
7	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and construction marshalling yards.	Negotiations with the incumbent utility could result in potential cost and schedule implications. The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should be sufficient time making this a potential but low risk. The estimate contingency should be sufficient to cover potential increased costs which is considered a low probability.
8	Design Concern - EMF	The Developer's calculations for EMF are currently estimated to exceed NYPSC guidelines for entire section.	EMF calculations will need to be confirmed during detail engineering. It is possible that EMF easements will need to be purchased for the entire ROW between Edic and New Scotland. At a minimum, easements will likely be required between Princetown and New Scotland. (The review team's independent cost estimate includes the cost for additional EMF easements.) This is considered a critical risk for all Segment A proposals with exception of T027 (double

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			circuit proposal).
9	Re-use of existing structures	During construction the Developer could discover that structures originally planned for re-use are in worse condition than expected or inadequate and require repair or replacement.	The Developer proposes reusing 92 structures on the double circuit Edic/Fraser and 230kV Line 30 beginning at Edic/Porter and continuing east for 12.6 miles. A cursory visual inspection indicate the structures are in good physical condition. Thorough inspection and analysis of existing structures is advisable prior to completing final design.

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SEGMENT B

T019	T019 – New York Energy Solution Segment B - National Grid/Transco			
#	Risk Title	Description	Comment	
1	FAA requirements	Additional requirements may be required to accommodate air traffic.	Green Acres Airport is located about 700 feet east of the proposed ROW. The risks are mitigated by early and frequent coordination with the FAA and the local airport.	
2	Design Concern - Pleasant Valley Substation (Con Ed Owned)	The Developer proposes terminating the new 345kV line from Knickerbocker Substation in Bay #2 of Pleasant Valley Substation, which could require Network Upgrade Facilities to expand the Pleasant Valley Substation depending on the outcome of the NYISO's 2017 Class Year Study.	This will likely require adding two 345kV breakers with disconnect switches to Bay #1. The Cricket Valley line will be moved from Bay #2 to Bay #1. Bay #2 will then be available for the new line from Knickerbocker. Additionally, the substation yard will have to be expanded to the southwest to accommodate one of the proposed 345kV capacitor banks. (This additional work is not included in the independent estimates.)	
3	Design Concern - Pleasant Valley Substation (Con Ed Owned)	Lack of space for additional panels in the control house.	The control house will need to be expanded to accommodate the additional panels. This is more apparent with the additional line for the Cricket Valley Project. (Expansion of the control house is included in the independent estimates.)	

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4	Construction Concern - Churchtown Substation (NYSEG Owned)	Developer proposes constructing a new 115kV, three-bay, breaker-and-a-half substation on the same property currently occupied by NYSEG's Churchtown Substation, eventually demolishing the entire existing substation.	The existing Churchtown substation feeds a radial 115kV line to NYSEG's Craryville and Klinekill Substations. Construction sequencing will have to be developed to maintain service to this line during construction of the new Churchtown substation.
5	Visual Concern – Proposed Transmission Lines	Potential of public opposition due to visual impact. NYPSC has encouraged that new structures have minimal increase in height.	Need to address during detail engineering. The Developer's proposal has the same number of structures as the existing line but 48% of them have an increase in height between 5 ft. and 20 ft. and 5% have a height increase of more than 20 ft. This is considered the highest risk for this proposal
6	Obtaining Site Control and Property Acquisition	National Grid owns all property required for new facilities. De minimis property may need to be acquired for access and construction marshalling yards.	National Grid's control of the property obviates any significant issue. Property will ultimately be transferred to the NY Transco.

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#	Risk Title	Description	Comment
1	FAA requirements	Additional requirements may be required to accommodate air traffic.	Green Acres Airport is located about 700 feet east of the proposed ROW. The risks are mitigated by early and frequent coordination with the FAA and the local airport.
2	Construction Concern – Use of Concrete Poles	Developer proposes using concrete poles for the majority of transmission line structures and has considered some of the concerns associated with transportation, public protection and community impact.	Developer needs to evaluate each proposed structure location during detailed engineering to verify delivery and installation feasibility, and develop a robust risk mitigation plan taking account of the project risks, planning and clear mitigation for problem areas.
3	Design Concern - Pleasant Valley Substation (Con Ed Owned)	The Developer proposes terminating the new 345kV line from Knickerbocker Substation in Bay #2 of Pleasant Valley Substation, which could require Network Upgrade Facilities to expand the Pleasant Valley Substation depending on the outcome of the NYISO's 2017 Class Year Study.	This will likely require adding two 345kV breakers with disconnect switches to Bay #1. The Cricket Valley line will be moved from Bay #2 to Bay #1. Bay #2 will then be available for the new line from Knickerbocker. (This additional work is not included in the independent estimates.)
4	Design Concern - Pleasant Valley Substation (Con Ed Owned)	Lack of space for additional panels in the control house.	The control house will need to be expanded to accommodate the additional panels. This is more apparent with the additional line for the Cricket Valley Project. (Expansion of

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			the control house is included in the independent estimates.)
5	Construction Concern - Churchtown Substation (NYSEG Owned)	Developer proposes constructing a new 115kV, two-bay, breaker-and-a-half substation north of NYSEG's Churchtown Substation. NYSEG's substation will remain in service upon completion of the AC Transmission Project.	Additional property may be required to accommodate storm water management system.
6	Visual Concern – Proposed Transmission Lines	Potential of public opposition due to visual impact. NYPSC has encouraged that new structures have minimal increase in height.	Need to address during detail engineering. The Developer's proposal has the same number of structures as the existing line but 73% of them have an increase in height between 5 ft. and 20 ft. This is considered the highest risk for this proposal
7	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and construction marshalling yards.	Negotiations with the incumbent utility could result in potential cost and schedule implications. The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should be sufficient time making this a potential but low risk. The estimate contingency should be sufficient to cover potential increased costs which is considered a low probability.

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#	Risk Title	Description	Comment
		2 33311, para 11	
1	FAA requirements	Additional requirements may be required to accommodate air traffic	Green Acres Airport is located about 700 feet east of the proposed ROW. The risks are mitigated by early and frequent coordination with the FAA and the local airport.
2	Construction Concern – Use of Concrete Poles	Developer proposes using concrete poles for the majority of transmission line structures and has considered some of the concerns associated with transportation, public protection and community impact.	Developer needs to evaluate each proposed structure location during detailed engineering to verify delivery and installation feasibility, and develop a robust risk mitigation plan taking account of the project risks, planning and clear mitigation for problem areas.
3	Design Concern - Pleasant Valley Substation (Con Ed Owned)	The Developer proposes terminating the new 345kV line from Knickerbocker Substation in Bay #2 of Pleasant Valley Substation, which could require Network Upgrade Facilities to expand the Pleasant Valley Substation depending on the outcome of the NYISO's 2017 Class Year Study.	This will likely require adding two 345kV breakers with disconnect switches to Bay #1. The Cricket Valley line will be moved from Bay #2 to Bay #1. Bay #2 will then be available for the new line from Knickerbocker. (This additional work is not included in the independent estimates.)
4	Design Concern - Pleasant Valley Substation (Con Ed Owned)	Lack of space for additional panels in the control house.	The control house will need to be expanded to accommodate the additional panels. This is more apparent with the additional line for the Cricket

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			Valley Project. (Expansion of the control house is included in the independent estimates.)
5	Construction Concern - Churchtown Substation (NYSEG Owned)	Developer proposes constructing a new 115kV, two-bay, breaker-and-a-half substation north of NYSEG's Churchtown Substation. NYSEG's substation will remain in service upon completion of the AC Transmission Project.	Additional property may be required to accommodate storm water management system.
6	Visual Concern – Proposed Transmission Lines	Potential of public opposition due to visual impact. NYS PSC has encouraged that new structures have minimal increase in height.	Need to address during detail engineering. The Developer's proposal has the same number of structures as the existing line but 83% of them have an increase in height between 5-ft. and 20-ft. This is considered the highest risk for this proposal
7	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and construction marshalling yards.	Negotiations with the incumbent utility could result in potential cost and schedule implications. The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should be sufficient time making this a potential but low risk. The estimate contingency should be sufficient to cover potential increased costs which is

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	considered a low probability.

#	Risk Title	Description	Comment
1	FAA requirements	Additional requirements may be required to accommodate air traffic	Green Acres Airport is located about 700 feet east of the proposed ROW. The risks are mitigated by early and frequent coordination with the FAA and the local airport.
2	Design Concern - Pleasant Valley Substation (Con Ed Owned)	The Developer proposes terminating the new 345kV line from Knickerbocker Substation in Bay #2 of Pleasant Valley Substation, which could require Network Upgrade Facilities to expand the Pleasant Valley Substation depending on the outcome of the NYISO's 2017 Class Year Study.	This will likely require adding two 345kV breakers with disconnect switches to Bay #1. The Cricket Valley line will be moved from Bay #2 to Bay #1. Bay #2 will then be available for the new line from Knickerbocker. (This additional work is not included in the independent estimates.)
3	Design Concern - Pleasant Valley Substation (Con Ed Owned)	Lack of space for additional panels in the control house.	The control house will need to be expanded to accommodate the additional panels. This is more apparent with the additional line for the Cricket Valley Project. (Expansion of the control house is included in the independent estimates.)
4	Visual Concern – Proposed Transmission	Potential of public opposition due to visual impact. NYS PSC has encouraged that new structures	Need to address during detail engineering. The Developer's proposal has the same number of structures as the existing line

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	Lines	have minimal increase in height.	but 14% of them have an increase in height between 5-ft. and 20-ft.
5	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and construction marshalling yards.	Negotiations with the incumbent utility could result in potential cost and schedule implications. The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should be sufficient time making this a potential but low risk. The estimate contingency should be sufficient to cover potential increased costs which is considered a low probability.

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T030) – Segment B Enhan	ced Base Proposal - North American	Transmission/NYPA
#	Risk Title	Description	Comment
1	FAA requirements	Additional requirements may be required to accommodate air traffic	Green Acres Airport is located about 700 feet east of the proposed ROW. The risks are mitigated by early and frequent coordination with the FAA and the local airport.
2	Design Concern - Pleasant Valley Substation (Con Ed Owned)	The Developer proposes terminating the new 345kV line from Knickerbocker Substation in Bay #2 of Pleasant Valley Substation, which could require Network Upgrade Facilities to expand the Pleasant Valley Substation depending on the outcome of the NYISO's 2017 Class Year Study.	This will likely require adding two 345kV breakers with disconnect switches to Bay #1. The Cricket Valley line will be moved from Bay #2 to Bay #1. Bay #2 will then be available for the new line from Knickerbocker. (This additional work is not included in the independent estimates.)
3	Design Concern - Pleasant Valley Substation (Con Ed Owned)	Lack of space for additional panels in the control house.	The control house will need to be expanded to accommodate the additional panels. This is more apparent with the additional line for the Cricket Valley Project. (Expansion of the control house is included in the independent estimates.)
4	Visual Concern – Proposed Transmission Lines	Potential of public opposition due to visual impact. NYS PSC has encouraged that new structures have minimal increase in height.	Need to address during detail engineering. The Developer's proposal has the same number of structures as the existing line but 14% of them have an increase in height between 5-ft.

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			and 20-ft. This is considered the highest risk for this proposal
5	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and construction marshalling yards.	Negotiations with the incumbent utility could result in potential cost and schedule implications. The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should be sufficient time making this a potential but low risk. The estimate contingency should be sufficient to cover potential increased costs which is considered a low probability.

Т032	T032 – 16NYPP1-1B AC Transmission - ITC						
#	Risk Title	Description	Comment				
1	FAA requirements	Additional requirements may be required to accommodate air traffic	Green Acres Airport is located about 700 feet east of the proposed ROW. The risks are mitigated by early and frequent coordination with the FAA and the local airport.				
2	Design Concern - Pleasant Valley Substation (Con Ed Owned)	The Developer proposes terminating the new 345kV line from Knickerbocker Substation in Bay #2 of Pleasant Valley Substation, which could require	This will likely require adding two 345kV breakers with disconnect switches to Bay #1. The Cricket Valley line will be moved from Bay #2 to Bay #1.				

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		Network Upgrade Facilities to expand the Pleasant Valley Substation depending on the outcome of the NYISO's 2017 Class Year Study.	Bay #2 will then be available for the new line from Knickerbocker. (This additional work is not included in the independent estimates.)
3	Design Concern - Pleasant Valley Substation (Con Ed Owned)	Lack of space for additional panels in the control house.	The control house will need to be expanded to accommodate the additional panels. This is more apparent with the additional line for the Cricket Valley Project. (Expansion of the control house is included in the independent estimates.)
4	Visual Concern – Proposed Transmission Lines	Potential of public opposition due to visual impact. NYS PSC has encouraged that new structures have minimal increase in height.	ITC's proposal has a less significant structure height increase than other developer proposals (46% with 5-ft. or less increase and only 1% with 5-ft. to 10-ft. increase) but increases the total number of structures by 15%. Impact of structure placement will have to be determined during detailed engineering. This is considered the highest risk for this proposal
5	Obtaining Site Control and Property Acquisition	Proposal utilizes existing ROW owned by National Grid. De minimis property may need to be acquired for access and construction marshalling yards.	Negotiations with the incumbent utility could result in potential cost and schedule implications. The review team's schedule provides two years for negotiation and procurement of ROW beginning with the notice to proceed. This should

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			be sufficient time making this a potential but low risk. The estimate contingency should be sufficient to cover potential increased costs which is considered a low probability.
6	Operation Concern – Triple Circuit Transmission Design	Developer proposes using triple circuit structures between Churchtown Substation and Pleasant Valley Substation. The proposed structures are in a two-pole configuration with one 345kV circuit attached horizontally to an upper crossarm and two 115kV circuits attached side by side horizontally to a lower crossarm.	The proposed compact design conserves space within the transmission corridor but creates an operations concern. Future maintenance of the transmission circuits and associated structures may depend on the outage availability of all the circuits attached. A maintenance plan must be developed prior to putting this configuration into service.

4.4. Expandability

In evaluating the expandability of a proposed regulated Public Policy Transmission Project, the NYISO OATT section 31.4.8.1.3 prescribed the following: "The ISO will consider the impact of the proposed project on future construction. The ISO will also consider the extent to which any subsequent expansion will continue to use this proposed project within the context of system expansion."

The review team conducted an initial review of the expansion capability of the Developers' proposals. The review centered predominately on the Developers' claimed expandability as presented in their proposals:

3.4.1. Items that may be considered common to all proposals:

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Many of the more common design approaches that could be employed on a transmission project to afford future expandability are not applicable since the objective of this project is to utilize existing rights-of-way (ROW). Much of the existing transmission ROW will be fully utilized in construction of this project but there is some opportunity for expansion.

Potential transmission expansion includes the following:

- All proposals for Segment A involve replacement of the existing Porter-Rotterdam 230 kV circuits #30 and #31 with a single Edic to New Scotland 345kV line. This will provide space for future use of the existing ROW and may allow for the addition of another circuit from Edic/Porter to Princetown Junction within the existing ROW, based on current electrical clearance requirements. Any proposal to construct an additional circuit is subject to the applicable permitting and regulatory requirements, such as public acceptance of visual impact, EMF compliance, compatibility with existing gas facilities and regulatory approvals.
 - For the base proposals, NextEra affords the most efficient use of the ROW by utilizing 100 ft. single-pole delta structures. National Grid/Transco, NAT/NYPA and ITC propose using 65-85 ft. H-pole structures, which requires the use of more space within the ROW. In all base proposals, there may be adequate space in the ROW remaining for an additional 345kV line. However, a compact transmission line configuration may be required to fit a future 345kV line in the remaining ROW.
 - All alternative proposals may also provide adequate space within the ROW for a future line with the exception of NAT/NYPA T027. The NAT/NYPA T027 double circuit line proposal utilizes all 4 existing circuit positions for the first 12 miles out of Edic.
 - During detailed engineering the placement of structures should be optimized to maximize the remaining ROW.
 - Refer to the table below for summary of the ROW requirements for each Developer's projects in the Edic to Princetown Junction corridor.

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	Segment-A						
Sector	Corridor Width (ft.)	Developer	Proposal	Proposed Structure Configuration	ROW Reqd. (ft.)	ROW Corridor Remaining (ft.)	Remarks
		NGRID/ Transco	T018	1 Ckt – 345kV H-pole Horizontal	120	80	Sufficient reserved ROW for expansion utilizing Compact Vertical Configuration
Edic		NextEra	T021	1 Ckt – 345kV Single Pole Delta	80	120	Sufficient reserved ROW for expansion utilizing H- pole Horizontal Configuration
SS to Prince -town Jct	200	NYPA/NAT	T026 & T028	1 Ckt – 345kV H-pole Horizontal	140 (a)	60 (a)	Sufficient reserved ROW for expansion utilizing Compact Vertical Configuration
		NYPA/NAT	T027	2 Ckt – 345kV Single Pole Vertical	105	95	Sufficient reserved ROW for expansion utilizing Single Pole Delta Configuration with exception of the first 12.6 miles out of Edic
		ITC	T031	1 Ckt – 345kV H-pole Horizontal	100 (b)	100 (b)	Sufficient reserved ROW for expansion utilizing Single Pole Delta Configuration

- (a) For NYPA/NAT proposals T026 & T028, 24 spans are limiting the remaining corridor to 60 ft. If, in the final design, the ROW requirement can be kept to within 60 ft. of either side of centerline (through increased tension, shorter span lengths or special design), the ROW required would be 120 ft., leaving 80 ft. for future expansion.
- (b) The ITC proposal T031 is able to have less of an ROW requirement due to using more structures and shorter span lengths.
 - The new Edic to New Scotland line for Segment A could be designed for double circuit capability similar to the NAT/NYPA T027 double circuit line proposal.
 - Transmission lines could be constructed with higher ampacity conductor or reconductored in the future.
 - Most proposals provide for future expansion of substations or could be modified to provide for additional line terminals and transformers in the new substations.

3.4.2. Items specific to each proposal:

Potential transmission expansion for each Developer's specific proposal is discussed in the summary table below.

Significant items specific to each developer:

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Proposal	Segment	Developer	Transmission Line Expandability	Substation Expandability
T018 - New York Energy Solution Segment A	A	National Grid/Transco	No significant expandability to NGRID's proposal beyond the common items mentioned above.	At Rotterdam Substation, the 345kV gas-insulated substation design provides one open 345kV bay position and room for additional 345kV bays. Design also provides ability to connect one additional 345kV/115kV transformer to support the local transmission system. Lastly, the design allows for the rebuilding of the 115kV straight bus configuration into a breaker-and-a-half configuration.
T021 - Enterprise Line: Segment A	A	NextEra	No significant expandability to NextEra's proposal beyond the common items mentioned above.	NextEra is proposing a "Princetown" substation approximately 3 miles east of the junction and 2 miles west of Rotterdam Substation on a new greenfield site. The design provides two open 345kV bay positions and room on the property for adding bays. NextEra's proposal maintains the existing and aging Rotterdam 230kV yard intact.
T025 - Segment A + 765kV Proposal	A	NYPA/North American Transmission	Including the common items above, the Developer states that converting the Marcy-New Scotland-Knickerbocker 345kV transmission lines to 765kV could significantly increase Central East transfer	At Rotterdam, rebuilding and relocating the 345kV substation allows for the rebuilding of the 115kV straight bus configuration into a breaker-and-a-half configuration. A new Princetown Substation is proposed at the junction of the 345kV

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			capability. (Note that T025 includes this conversion.)	Edic-New Scotland line and the 230kV Porter to Rotterdam lines. Due to the proximity to the neighboring properties, constructing or expanding the substation will be difficult. At New Scotland, proposal T025 eliminates the 345kV line to Alps thus creating an open line terminal position.
T026 - Segment A Base Proposal	А	NYPA/North American Transmission	No significant expandability to NYPA/NAT's proposal beyond the common items mentioned above.	At Rotterdam, rebuilding and relocating the 345kV substation allows for the rebuilding of the 115kV straight bus configuration into a breaker-and-a-half configuration.
T027 - Segment A Double Circuit Proposal	A	NYPA/North American Transmission	No significant expandability to NYPA/NAT's proposal beyond the common items mentioned above.	At Rotterdam, rebuilding and relocating the 345kV substation allows for the rebuilding of the 115kV straight bus configuration into a breaker-and-a-half configuration. A new Princetown Substation is proposed at the junction of the 345kV Edic-New Scotland line and the 230kV Porter to Rotterdam lines. Due to the proximity to the neighboring properties, constructing or expanding the substation will be difficult. At Edic, it should be noted that a potential spare

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				terminal position (shown on the Developer's drawings) in the proposed bay north of Bay #1 is already occupied by a 345kV capacitor bank.
T028 - Segment A Enhanced Proposal	A	NYPA/North American Transmission	No significant expandability to NYPA/NAT's proposal beyond the common items mentioned above.	At Rotterdam, rebuilding and relocating the 345kV substation allows for the rebuilding of the 115kV straight bus configuration into a breaker-and-a-half configuration. A new Princetown Substation is proposed at the junction of the 345kV Edic-New Scotland line and the 230kV Porter to Rotterdam lines. Due to the proximity to the neighboring properties, constructing or, if constructed, expanding the substation will be difficult.
T031 - 16NYPP1-1A AC Transmission	A	ITC	No significant expandability to ITC's proposal beyond the common items mentioned above.	ITC's proposal does not provide any additional bays at Princetown or Rotterdam Substations. ITC's proposal maintains the existing and aging Rotterdam 230kV yard intact. Additionally, physical limitations at these properties may preclude future expansions without purchasing additional property.

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Proposal	Segment	Developer	Transmission Line Expandability	Substation Expandability
T019 - New York Energy Solution Segment B	В	National Grid/Transco	No significant expandability to NGRID's proposal beyond the common items mentioned above.	At Knickerbocker Substation, the proposed design provides one open 345kV bay position. The Knickerbocker design also allows the 345kV ring bus configuration to be converted to a breaker- and-a-half configuration with room on the property for adding bays. At Churchtown Substation, design provides one open 115kV bay position. Additional breaker-and-a- half bays can be added in the future.
T022 - Enterprise Line: Segment B	В	NextEra	No significant expandability to NextEra's proposal beyond the common items mentioned above.	At North Churchtown Substation, the proposed design provides one open 115kV bay position and with room on the property for adding bays. The southern-most bay could also be built out to a breaker-and-a-half configuration. At Knickerbocker Substation, the proposed design provides one open 345kV bay position. The Knickerbocker design also allows the 345kV ring bus configuration to be converted to a breaker- and-a-half configuration with room on the property for adding bays.

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T023 - Enterprise Line: Segment B- Alt	В	NextEra	No significant expandability to NextEra's proposal beyond the common items mentioned above.	Same comments as stated for T022 also apply to T023.
T029 - Segment B Base Proposal	В	NYPA/North American Transmission	No significant expandability to NYPA/NAT's proposal beyond the common items mentioned above.	The Developer proposes a new 115kV breaker-and-a-half substation and eliminates the existing NYSEG Churchtown substation. The three-bay substation is proposed for south of the existing substation and north of Orchard Road. This location will permit future expansion of the proposed substation to the north. At Knickerbocker, the Developer's design allows the 345kV ring bus configuration to be converted to a breaker-and-a-half configuration with room on the property for adding bays.
T030 - Segment B Enhanced Proposal	В	NYPA/North American Transmission	No significant expandability to NYPA/NAT's proposal beyond the common items mentioned above.	The Developer proposes a new 115kV breaker-and-a-half substation and eliminates the existing NYSEG Churchtown substation. The three-bay substation is proposed for south of the existing substation and north of Orchard Road. This location will permit future expansion of the substation to the north. At Knickerbocker, the Developer's design allows

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				the 345kV ring bus configuration to be converted to a breakerand-a-half configuration with room on the property for adding bays.
T032 - 16NYPP1-1B AC Transmission	В	ITC	No significant expandability to ITC's proposal beyond the common items mentioned above.	At Knickerbocker Substation, the design provides one open 345kV bay position and one open 115kV bay position. The Knickerbocker design also allows the 345kV and 115kV ring bus configurations to be converted to a breaker- and-a-half configuration. The detailed design could also optimize the physical layout on the property possibly providing room for additional bays. Additionally, during detailed design, the ability to connect up to two 345kV – 115kV transformers to support the local transmission system could be provided.

4.5. Site Control and Real Estate

4.5.1. Site Control

In evaluating site control of a proposed regulated Public Policy Transmission Project, The NYISO OATT section 31.4.8.1.6 specifies that the evaluation will assess the following: "The extent to which the Developer of a proposed regulated Public Policy Transmission Project has the property rights, or ability to obtain the property rights, required to implement the project. The ISO will consider whether the Developer: (i) already possesses the rights of way necessary to implement the project; (ii) has completed a transmission routing study, which (a) identifies a specific routing plan with alternatives,

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(b) includes a schedule indicating the timing for obtaining siting and permitting, and (c) provides specific attention to sensitive areas (e.g., wetlands, river crossings, protected areas, and schools); or (iii) has specified a plan or approach for determining routing and acquiring property rights."

The review team conducted a review of the Developers' property rights acquisition plans contained in their proposals. The review centered on the Developers' information and plans presented in their proposals and additional information provided in response to NYISO RFIs.

In all proposals, the following is common for the property rights acquisition process:

- The NYPSC prescribed specific requirements in Appendix B of its Order Finding Transmission Needs Driven by Public Policy Requirements, dated December 17, 2015.
 - No transmission solution shall be selected that requires the acquisition of new permanent transmission ROW, except for de-minimis acquisitions that cannot be avoided due to unique circumstances. The NYPSC specified that for the purposes of meeting this criterion, the transfer or lease of existing transmission ROW property or access rights from a current utility company owner to a Developer shall not be considered such an acquisition.
 - The selection process for transmission solutions shall favor transmission solutions that minimize the acquisition of property rights for new substations and substation expansions. The NYPSC specified that for the purposes of this criterion, the transfer or lease of existing property rights from a current utility company owner to a Developer shall not be considered such an acquisition.
 - No transmission solution shall be selected that includes a crossing of the Hudson River, either overhead, underwater, in riverbed, or underground, or in any other way, by any component of the transmission facility.

The non-incumbent Developers all claim two common rights in obtaining property:

• The Developers cite to the NYPSC's December 15, 2015 order in the AC Transmission proceeding (Case Nos. 12-T-0502, et al.) as requiring incumbent utilities to engage in non-discriminatory, good faith negotiation of terms in obtaining rights to use an incumbent utility's ROW. The NYPSC's order specifically stated that the "Commission expects the utility company owner to bargain in good faith to reach an agreement with the developer of the transmission solution as to property access and compensation as it would for other linear project developers

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that seek to co-locate on utility property." Further, the NYPSC stated that "incumbent utilities should offer competitors the same terms they offer Transco; there should be no bias shown to Transco."

• If negotiations with private land owners are unsuccessful, the Developers believe that under New York State Law, they will have eminent domain authority after certification of a route by the NYPSC.

Below is a summary of the teams' review:

#	Developer	Property Rights Acquisition
T018	National	NGRID completed a routing study and states that "the ROW
T019	Grid/Transco	targeted for this project is either fee-owned by, or under the
		control (via easement or permit)," of NGRID.
		NGRID will transfer ownership all assets to the Transco.
T025	NYPA/North	The proposed project's route would use existing ROW owned
T026	American	by the incumbent utility (National Grid).
T027	Transmission	
T028		NYPA/NAT lays out a plan in their proposal (Attachment
T029		C.2AProperty Right Acquisition Plan) for obtaining site control.
T030		They would rely on NYPA, which has extensive experience in
		negotiating and obtaining easements, including from other
		incumbent utilities, to lead negotiations with the other New
		York Transmission Owners.
		NYPA/NAT does not yet possess the required ROWs. However,
		they have a documented plan to obtain the real property.
T021	NextEra	The proposed project's route would use existing ROW owned
T022		by the incumbent utility (National Grid) with the exception of
T023		property to be acquired for the Princetown Junction
		substation. NextEra has already obtained an option to
		purchase the real estate for the proposed substation site.
		NextEra lays out a plan for obtaining site control in their
		proposal (Attachment B Requirement #7).
		NextEra does not yet possess the required ROWs. However, it

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		has a documented plan to obtain the necessary real property.
T031 T032	ITC	Their route would use existing ROW owned by the incumbent utility (National Grid). It is likely that some additional property will be required to construct their proposed Princetown Junction Substation.
		ITC lays out a plan for obtaining site control in their proposal (Attachment C.2A)
		ITC does not yet possess the required ROWs. However, they have a documented plan to obtain the real property.

4.5.2. Real Estate Analysis

A review of the proposed routing for the transmission lines and substations was completed to identify property that each Developer would need to obtain for their proposed project. Estimates for the property were derived by obtaining recent comparable sales and tax assessments from municipal tax records in the town and county where the property is located and commercially available software. The estimated cost of the required property was included in the independent estimates.

All Developers propose to utilize existing incumbent-owned property and ROW with the following exceptions:

- All proposals for Segment A with the exception of NAT/NYPA Double Circuit
 Alternative T027 proposal will likely require the acquisition of easements to meet
 EMF guidelines in the Princetown Junction to New Scotland corridor. NYPA/NAT's
 T025 765kv line conversion also requires additional easements to meet EMF
 guidelines.
- *De minimis* property rights may be required for construction laydown area and access, tree trimming or danger tree clearing.
- Development of a new substation at the Princetown Junction may require additional property or easements.
 - Proposals T018 and T026 do not include a substation at Princetown Junction.

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- NextEra proposal T021 proposes to build the substation at Princetown Junction on a new greenfield site for which they have obtained an option to acquire.
- Proposal T031 proposes to tie all seven lines into a substation at Princetown Junction, which will require additional property.
- Proposals T025, T027, and T028 propose smaller substations at Princetown
 Junction with four breaker ring bus arrangements or GIS equipment that may fit
 in the existing property. Although it appears that placing these stations on the
 site is possible, the review team has identified this as a potential risk that will
 need to be carefully considered and potentially mitigated during detailed
 engineering and licensing development.
- A summary of substation property requirements for Segment A is shown below.
 The amount of property required for each proposal is listed by the acreage within exiting utility owned property and the amount that needs to be acquired from a non-utility owner.

₹				OWNER NAME	
PROPOSAL	DEVELOPER	SUBSTATION	COUNTY	NATIONAL GRID/ NIAGARA MOHAWK (ACRES)	NON-UTILITY (ACRES)
T018	National Grid / NY Transco	Rotterdam Substation (Extension)	Schenectady	2.60	
T021	NextEra Energy	Princetown Substation (New)	Schenectady		24.0
		Knickerbocker Substation (New)	Rensselaer	30.00	
T025	NYPA / NAT	Princetown Substation (New)	Schenectady	3.00	
		Rotterdam Substation (New)	Schenectady	7.50	
T026	NYPA / NAT	Rotterdam Substation (New)	Schenectady	7.50	
	NYPA / NAT	Edic Substation (Extension)	Oneida	1.25	
T027		Princetown Substation (New)	Schenectady	3.00	
		Rotterdam Substation (New)	Schenectady	7.50	
T020	AN/DA /AIAT	Princetown Substation (New)	Schenectady	3.00	
T028	NYPA / NAT	Rotterdam Substation (New)	Schenectady	7.50	
T024	ITC	Princetown Substation (New)	Schenectady	5.50	2.6
T031	ITC	Rotterdam Substation (Extension)	Schenectady	2.50	

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4.6. Operational Plan

The review team conducted an evaluation of the Developers' operations and maintenance (O&M) plans detailed in their proposals. The review centered on the Developers' proposals and additional information provided in response to a NYISO RFI submitted to Developers in November 2017. The following are common elements of the Developers O&M plans.:

- All O&M activities will comply with NERC regulations.
- Real time system operations will be conducted by the NYISO.
- Control center schedules will be 24-7-365.

Below is a summary of the teams' review of the proposed O&M plans . The review team did not identify any major flaw with any Developers' plans. With the exception of ITC, all Developers propose to operate their facilities from an in-state control center.

#	Developer	Operations	Maintenance
T018 T019	National Grid / TRANSCO	NGRID/TRANSCO did not provide an O&M plan with its proposal. However, the review team recognizes that as a New York Transmission Owner, NGRID has a demonstrated history of operating and maintaining its transmission and distribution systems.	See comment under Operations.
T021 T022 T023	NextEra	NextEra will build and operate a primary and backup control center within New York State. Multi-site EMS with redundant servers and telecommunication will interface real-time situational awareness with the NYISO and neighboring control areas. Power Delivery and Support Center in Florida provides added backup.	Transmission line and substation maintenance activities will be managed and performed by NextEra staff supplemented with third-party contractors. NextEra has experience maintaining transmission systems in other areas of the country and provided a detailed maintenance plan.

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		Policies and training program for operators to meet NERC, Transmission Owner's and System Operator standards.	
T025 T026 T027 T028 T029 T030	North American Transmission/ New York Power Authority	Developer states real-time system monitoring and control center services will be provided by NYPA from their Blenheim Gilboa Facility.	Transmission line and substation maintenance will be managed by local NYPA staff. Maintenance activities will be performed by third-party contractors. NYPA has experience maintaining 1400 miles of transmission with an in-house staff of engineers, operators, planners, electricians and line engineers.
T031 T032	ITC	ITC Holdings currently operates and maintains 15,000 miles of transmission and 557 substations from a control center in Novi, Michigan and proposes to operate the proposed facilities from that center.	ITC uses dedicated O&M contractors under exclusive contract for storm restoration. ITC Holdings in-house staff of engineer's designers, P&C, SCADA and construction supervisors are available to assist after the project is put inservice. ITC has Line Outage Guidelines and an Emergency Operations Plan that incorporates use of a local utility's workforce with whom they would partner to provide O&M services.

4.7. Field Reviews

Field review of proposed transmission line routes and substations was completed by the review team. The results of those field reviews are documented in a report supplemented with checklists and maps marked with comments and observations. The review team used the results to develop the project scheduling and cost estimates and identify potential issues and risks with the proposed design, siting and routing.

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4.8. Work Plans

The Developers' work plans should provide a detailed description of the overall work plan from start to finish; should list items to be done by in-house staff; and list services that will be performed by consultants or contractors. No significant deficiencies were found in the work plans and processes proposed by any of the Developers. A high-level summary of work plans follows:

- All selected Developers have a history of managing successful transmission and substation design and construction projects. There was variation in the degree of self-performance of work versus using third-party contractors. All Developers propose to manage internal and external resources.
- All Developers include work plan activities in their estimates and schedules. More detailed
 analysis of the construction work plans is discussed in the Schedule analysis section of this
 report.
- All Developers propose Permitting and Regulatory activities to be performed by a mix of inhouse staff and outside consultants.
- All Developers propose to contract for a portion of the engineering and self-perform the remainder.
- All Developers propose to contract transmission line and substation surveying.
- All Developers propose to contract for site work and construction. National Grid plans to contract out or self-perform above grade/structures and electrical construction.
- NextEra and ITC indicate that they would share public outreach efforts with public relations firms. All Developers signal the importance of early and careful attention to public outreach.
- It was not possible to evaluate external team members at this stage, as they are expected to be selected competitively after award from among leading engineering, geo-technical, environmental and construction firms.

4.9. Environmental

All of the Developers' proposals recognize the need for environmental studies, permits and approvals from various federal and state government agencies. Standard permit requirements include: transmission approval from the NYPSC under Article VII; wetland delineation and protection; archeological studies; storm water pollution prevention requirements; stream protection; invasive species management; agricultural land protection; and rare, threatened and endangered species surveys and protection. The Developers acknowledge the possibility that their proposals could require modification to address additional permit conditions. At this point in the project planning process, it is difficult to ascertain what those permit conditions would be. Based on available information, there do not appear to be any environmental issues

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that would prevent the projects from being constructed. The following is a general discussion of the most significant environmental issues and factors that could affect each of the proposals.

4.9.1.Transmission Lines

All the projects propose utilizing the same existing ROW for the transmission lines, except for the additional 765-kV line proposed in T025. Any additional clearing of the ROW to accommodate the proposed transmission lines is expected to proportionally increase the environmental impacts and risks. These impacts and risks are further described below.

4.9.1.1. Clearing of ROW

The tables below present the estimated acreage that would need to be cleared of trees to accommodate the transmission lines for each proposed project. The ROW being cleared will require environmental and archeological studies. These studies could discover sensitive areas that may require re-routing of the transmission line or relocating structures to avoid area impacts. The projects will also require vegetative mowing within existing ROWs, which is typically considered a slight environmental impact, and has not been included in the tables below.

AC TRANSMISSION PROJECT SEGMENT A: Estimate of Heavy Clearing (Acres)							
T018	T021	T025	T026	T027	T028	T031	
19	0	132	34	0	34	38	

AC TRANSMISSION PROJECT SEGMENT B: Estimate of Heavy Clearing (Acres)							
T019	T022	T023	T029	T030	T032		
40 10 19 28 34 19							

4.9.1.2. ROW Access, Clearing, and New Structures in Wetlands The projects, including the substation footprint and/or the new transmission structures, could have a permanent impact on regulated wetlands. The table below presents the estimated acreage of wetland impacts including permanent wetland

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loss from the new structure footprints, and the estimated acreage of forested wetlands that will likely be cleared by each project due to the proposed transmission lines. Forested wetlands are a very valuable ecological resource in New York, and proposed tree clearing will require mitigation of impacts, including possible replacement offsite. While an estimate of these mitigation costs has been provided, there is the potential that project regulatory approval could take additional time, and an alternate structure location or construction access may be required to avoid the wetland entirely.

Access through wetlands and locating structures in wetlands will need to be avoided to the greatest extent practical. Black Creek Marsh State Wildlife Management Area, located on the Princetown-New Scotland section of Segment A, will present some difficult access issues that will have to be approved by the New York State Department of Environmental Conservation (NYSDEC). This could require the use of specialized equipment or possible relocation of the transmission line.

Additionally, temporary wetland impacts are anticipated to allow construction access and the placement of temporary matting will be required to minimize surface damages to wetlands. Post-construction restoration efforts may also be required depending on the severity of these construction impacts (*e.g.*, soil disturbance, vegetation dieback).

Regarding permanent impacts to wetlands, loss of wooded wetlands due to ROW clearing, and loss of any wetlands due to proposed structure installations (assuming 60 square feet for each pole footprint) are estimated in the tables below. If on-site mitigation is not possible due to required ROW maintenance, then offsite mitigation may be necessary.

AC TRANSMISSION PROJECT A:						
Estimate of Impacted Wetlands (Acres)						
T018	T021	T025	T026	T027	T028	T031
0.456	0.198	1.257	0.46	0.493	0.463	0.561

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AC TRANSMISSION PROJECT SEGMENT B: Estimate of Impacted Wetlands (Acres)							
T019	T022	T023	T029	T030	T032		
0.055 0.064 0.064 0.064 0.064 0.072							

For the project to be approved under the USACE Nationwide Permit Program (NWP 12 Utility Line Activities), the actions required for the construction, maintenance, repair, and removal of utility lines and associated facilities (including the construction of access roads) in waters of the United States (*i.e.* wetlands) cannot result in the loss of greater than ½ acre of non-tidal waters for a single and complete project. If the project does not qualify for the Nationwide Permit, an Individual Permit will be required, which may involve a longer review timeframe.

4.9.1.3. Clearing of Protected Species Habitat

The project area may include critical habitats for rare, threatened or endangered plant or animal species, such as the Northern Long Eared Bat, Bog Turtle, Karner Blue Butterfly and/or Dwarf Wedgemussel. If such habitat is identified, agency review and response times are likely to increase along with timeframe for obtaining project approvals, and an alternate route may be required to protect the critical habitat. Seasonal restrictions may also be imposed to control ROW mowing or clearing, which could further delay the project construction timeline.

4.9.1.4. Visual Impacts

Typically, visual impacts are categorized as minor, moderate or significant/major with regards to how project structures may be seen from sensitive receptors (i.e., parks, trails, scenic roads, historic sites) and overall community/neighborhood character. Visual assessments of the proposed transmission lines may also be required, which would include visual simulations and viewshed maps. If the line is determined to impact scenic resources or is not compatible with the character of the community, the line configuration could require modifications. The type of structure will affect its visibility with lattice type towers having the highest impact. No lattice towers are proposed for this project and most of the structures being removed are lattice towers. All Developers have proposed the use of steel or concrete monopole and H frame structures. In in its December 17, 2015 Order, the NYPSC encouraged Developers to minimize structure heights.

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Segment A

The height of the structure will increase its visibility and, therefore, potentially increase the visual impact. The following tables summarize the estimated difference in height of the existing structures being removed and proposed structures for the Segment A projects. The comparison demonstrates the relative height differences for the proposed projects. It should be noted that the proposed lines parallel the existing line #18, between Princetown Junction and New Scotland, which is constructed for 765kV construction and has structures ranging in height from 135 feet to 195 feet and the proposed structures range in height from 60-145 ft. Green highlight indicates that no visual impacts are expected due to the height of the proposed structures. When structures are replaced, height increases over 10 feet are typically classified as "severe" visual impacts.

	Number of Structures						
	T018	T021	T025	T026/T028	T027	T031	
1. Less than 0 ft.	62	0	269	269	19	28	
2. Same Ht.	9	0	7	7	11	581	
3. From 0.1ft to 5 ft.	30	3	51	51	76	69	
4. From 5.1 ft to 10 ft.	56	5	33	33	5	10	
5. From 10.1 ft to 15 ft.	72	45	35	34	47	0	
6. From 15.1 ft to 20 ft.	97	72	65	66	40	2	
7. From 20.1 ft to 25 ft.	74	490	38	38	69	1	
8. From 25.1 ft to 30 ft.	68	67	9	9	204	0	
9. From 30.1 ft to 40 ft.	52	67	18	18	95	0	
10. From 40.1 ft to 50 ft.	21	21	10	9	34	0	
11. From 50.1 ft to 60 ft.	23	4	6	1	22	0	
12. From 60.1 to 70 ft.	8	1	1	0	1	0	
13. From 70.1 to 80 ft.	2	1	1	1	4	0	
14. From 80.1 to 90 ft.	0	0	5	0	4	0	
15. From 90.1 to 100 ft.	1	0	3	1	0	0	
16. From 100.1 to 110 ft.	0	0	0	0	0	0	
17. From 110.1 to 120 ft.	0	0	2	0	0	0	
Total	575	776	553	537	631	691	

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		Percent of Structures						
	T018	T021	T025	T026/T028	T027	T031		
1. Less than 0 ft.	10.8%	0.0%	48.6%	50.1%	3.0%	4.1%		
2. Same Ht.	1.6%	0.0%	1.3%	1.3%	1.7%	84.1%		
3. From 0.1ft to 5 ft.	5.2%	0.4%	9.2%	9.5%	12.0%	10.0%		
4. From 5.1 ft to 10 ft.	9.7%	0.6%	6.0%	6.1%	0.8%	1.4%		
5. From 10.1 ft to 15 ft.	12.5%	5.8%	6.3%	6.3%	7.4%	0.0%		
6. From 15.1 ft to 20 ft.	16.9%	9.3%	11.8%	12.3%	6.3%	0.3%		
7. From 20.1 ft to 25 ft.	12.9%	63.1%	6.9%	7.1%	10.9%	0.1%		
8. From 25.1 ft to 30 ft.	11.8%	8.6%	1.6%	1.7%	32.3%	0.0%		
9. From 30.1 ft to 40 ft.	9.0%	8.6%	3.3%	3.4%	15.1%	0.0%		
10. From 40.1 ft to 50 ft.	3.7%	2.7%	1.8%	1.7%	5.4%	0.0%		
11. From 50.1 ft to 60 ft.	4.0%	0.5%	1.1%	0.2%	3.5%	0.0%		
12. From 60.1 to 70 ft.	1.4%	0.1%	0.2%	0.0%	0.2%	0.0%		
13. From 70.1 to 80 ft.	0.3%	0.1%	0.2%	0.2%	0.6%	0.0%		
14. From 80.1 to 90 ft.	0.0%	0.0%	0.9%	0.0%	0.6%	0.0%		
15. From 90.1 to 100 ft.	0.2%	0.0%	0.5%	0.2%	0.0%	0.0%		
16. From 100.1 to 110 ft.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
17. From 110.1 to 120 ft.	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%		

Based upon the estimates above, proposal T031 would have the least visual impacts by a considerable margin, although it does use more structures than all other proposals, except proposal T021. Proposal T031 is also removing 20 additional miles of lattice structures along Princetown Junction to New Scotland (circuit 14), which none of the other proposed projects are removing. Using the 10-foot height increase as the basis for ranking the visual impacts, proposals T026/T028 would have the second lowest visual impact, with about a third of the structures having a height increase of 10 feet or more. Proposal T018 would be fourth followed by proposal T027. Proposal T021 would have the most visual impact with 99% of the structures having a height increase of more than 10 feet. In addition, proposal T021 is proposing the greatest number of structures.

Proposal TO25 would have the third lowest overall visual impact based upon the table and method discussed above. However, the most significant visual impacts for proposal TO25 are due to proposed height increase for the 2.5 miles of new 765 kV transmission line structures. This will involve 16 new two and three pole structures that range in height from 130 to 165 feet. In the section of the line where there is the existing 115 kV transmission line, the four new structures will be approximately 80 feet taller than the existing structures. On other sections, the height increase will be approximately 40 feet or more.

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Segment B

The following tables summarize the estimated difference in height of existing structures being removed and proposed structures for Segment B projects. The comparision demonstrates the relative height differences for the proposed projects. Green highlight indicates no visual impact due to height of the proposed structures. When structures are replaced, height increases over 10 feet are typically classified as "severe" visual impacts.

		N	umber of Structure	es	
	T019	T022	T023	T029/T030	T032
1. Less than 0 ft.	87	49	6	222	240
2. Same Ht.	3	1	2	77	6
3. From 0.1ft to 5 ft.	97	58	60	44	218
4. From 5.1 ft to 10 ft.	108	181	114	44	6
5. From 10.1 ft to 15 ft.	66	116	227	12	0
6. From 15.1 ft to 20 ft.	20	0	0	3	0
7. From 20.1 ft to 25 ft.	12	0	0	1	0
8. From 25.1 ft to 30 ft.	4	0	0	0	0
9. From 30.1 ft to 40 ft.	4	0	0	0	0
10. From 60.1 ft to 70 ft.	0	0	0	2	0
Total	401	405	409	405	470

		Percent of Structures						
	T019	T022	T023	T029/T030	T032			
1. Less than 0 ft.	21.7%	12.1%	1.5%	54.8%	51.1%			
2. Same Ht.	0.7%	0.2%	0.5%	19.0%	1.3%			
3. From 0.1ft to 5 ft.	24.2%	14.3%	14.7%	10.9%	46.4%			
4. From 5.1 ft to 10 ft.	26.9%	44.7%	27.9%	10.9%	1.3%			
5. From 10.1 ft to 15 ft.	16.5%	28.6%	55.5%	3.0%	0.0%			
6. From 15.1 ft to 20 ft.	5.0%	0.0%	0.0%	0.7%	0.0%			
7. From 20.1 ft to 25 ft.	3.0%	0.0%	0.0%	0.2%	0.0%			
8. From 25.1 ft to 30 ft.	1.0%	0.0%	0.0%	0.0%	0.0%			
9. From 30.1 ft to 40 ft.	1.0%	0.0%	0.0%	0.0%	0.0%			
10. From 60.1 ft to 70 ft.	0.0%	0.0%	0.0%	0.5%	0.0%			

Based upon the estimates and criteria described above, proposal T032 would have the least significant visual impact due to height increase; however, it adds 65 (16%) more structures than any other proposed project which could have additional visual impacts. Proposal T029/30 would have the second least visual impact with only 5% of the structures

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increasing in height by more than 10 feet. Proposals TO19 and TO22 would have comparable visual impacts, with 26% and 29% of the structures increasing in height by more than 10 feet, respectively. However, proposal TO22 is proposing to remove 32.6 less miles of lattice structures along Churchtown to Pleasant Valley (circuits 12 and 13) than all the other proposed projects. Proposal TO23 would have the most significant visual impact, if only the height increase is considered, with 56% of the structures increasing in height by 10 to 15 feet.

4.9.1.5. Agricultural Impacts

Early coordination with agricultural landowners, and consideration of potential impacts to farmland will be needed for the proposed project. Siting and construction coordination will be needed to minimize impacts on prime agricultural lands and to limit loss of crop production. Site restoration of disturbed and compacted soils will be required. Herbicide use may be restricted during construction and long-term ROW maintenance operations. Transmission line siting near Certified Organic Farms may require additional planning and consideration for compliance with organic certification. If the proposed transmission line would cross properties within an Agricultural Conservation Easement Program or Land Trust, then additional agency coordination will be needed.

The estimated acreage of agricultural land that will be temporarily impacted by each proposed project within their respective segments is nearly equivalent.

Assuming 20-foot-wide matting is used where the ROW is adjacent to Agricultural Districts or crop land, the estimated temporary impact to Segment A would be 94.5 acres, and the estimated temporary impact to Segment B would be 24.75 acres.

4.9.2. Substations and Switching Stations

Proposed projects do vary in the number, size and location of new or expanded substations or switching stations. Both temporary and permanent environmental impacts could result from the construction and installation of the proposed stations, including: visual, noise, tree clearing, and increased stormwater run-off (which will likely require construction of stormwater retention). Fewer or smaller stations would have less environmental impact. The table below provides the total estimated area required for the new or expanded stations, including the estimated area for stormwater retention basins, and the total number of stations.

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AC TRANSMISSION PROJECT SEGMENT A: Estimated Station Area (Acres/(number))						
T018	T021	T025	T026	T027	T028	T031
2.6	24.0	40.5	7.5	11.8	10.5	10.6
(1)	(1)	(3)	(1)	(3)	(2)	(2)

AC TRANSMISSION PROJECT SEGMENT B: Estimated Station Area (Acres/(number))						
T019	T022	T023	T029	T030	T032	
26.8	19.5	19.5	25.4	25.4	20.3	
(3)	(2)	(2)	(2)	(2)	(2)	

4.10. Replacement of Aging Infrastructure

In Appendix B of the December 17, 2015 Order Finding Transmission Needs Driven by Public Policy Requirements, the NYPSC stated: "The selection process for transmission solutions shall favor transmission solutions that result in upgrades to aging infrastructure." All of the proposed projects include upgrades to aging transmission line infrastructure.

4.10.1. The following table is a summary of the transmission line mileages to be removed for each Segment A proposal. All proposals intend to utilize existing double circuit structures for the first 12.6 miles heading east out of Edic/Porter. These structures are approximately 30 years old. They appear well maintained and in very good physical condition. It would not be prudent to replace those structures at this time. The table below shows that ITC's proposal T031 and NYPA/NAT's proposal T027 would replace more miles of existing infrastructure than the other proposals. ITC intends to rebuild the Princetown to New Scotland section of existing circuit #14. NYPA/ NAT (T027) proposes that line# 14 be rebuilt for only 6.3 miles from Princetown Junction where the ROW is only 370ft. wide. The replacement of 6.3 miles of lattice structures with single steel pole vertical structure is to accommodate the proposed double circuit 345kV line.

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SEGMENT A	CIRCUIT NUMBER	T018 (NGRI D/NY TRAN SCO)	T021 (NEXT ERA)	T025 (NYPA/ NAT)	T026 (NYPA /NAT)	T027 (NYPA/ NAT)	T028 (NYPA /NAT)	T031 (ITC)
Marcy - New Scotland	18	0	0	2.66	0	0	0	0
Princetown Junction - New Scotland	14	0	0	0	0	6.3	0	20
Miles of 345kV Removed		0	0	2.66	0	6.3	0	20
Edic - Princetown Junction	30*	66.8	66.8	66.8	66.8	66.8	66.8	66.8
Edic - Princetown Junction	31**	54.2	54.2	54.2	54.2	66.8	54.2	54.2
Princetown Junction - Rotterdam	30	5	5	5	5	5	5	5
Princetown Junction - Rotterdam	31	5	5	5	5	5	5	5
Miles of 230kV Removed		131	131	131	131	143.6	131	131
Princetown Junction - New Scotland	13	2.5	2.5	2.5	2.5	2.5	2.5	0
Miles of 115kV Removed		2.5	2.5	2.5	2.5	2.5	2.5	0
Total Miles of Line Removed		133.5	133.5	136.16	133.5	152.4	133.5	151

^{*} All developers are proposing to reuse existing double circuit poles for the first 12.6 miles east out of Edic/Porter. Therefore 12.6 miles of removal shown includes wire, insulators and hardwares only

4.10.2. Replacement of Aging Infrastructure – Substations

- The Segment A proposals predominately affect four existing substations: National Grid's Edic, New Scotland, Porter and Rotterdam substations. Additionally, NYPA/NAT proposal T025 also affects the NYPA's Marcy 765 kV station.
- At Edic, NAT/NYPA T025, T026, T027, and T028 are replacing two 345kV circuit breakers due to loading. At Marcy they are replacing three 345kV circuit breakers.
- At New Scotland, NGRID proposal T018 replace the existing R81 and R82 (oil) tie breakers with new SF6 units. In addition, the review team identified the need to replace these breakers for NextEra proposal T021 due to physical limitations with proposal T021. None of the remaining proposals replace any existing equipment.
- At Porter, all proposals retire 230 kV circuit breakers R300, R320 for Line #30 and breaker R310 for Line #31.

^{* *} T027 (NYPA/ NAT proposing to reuse existing double circuit poles for the first 12.6 miles east out of Edic/Porter. Therefore 12.6 miles of removal shown includes wire, insulators and hardwares only

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- At Rotterdam, NGRID proposal T018 and the NYPA/NAT proposals T025, T026, T027, and T028 remove the 230 kV yard from service. ITC proposal T031 does not replace any existing equipment. NextEra proposal T021 does not affect Rotterdam substation.
- 4.10.3. The following table summarizes the transmission line mileage to be removed by each project for each Segment B proposal. The table below shows that NextEra proposal T022 would replace about 65 less miles of existing infrastructure than the other proposals.

SEGMENT B	CIRCUIT NUMBER	T019 (NGRID/NY TRANSCO)	T022 (NEXTERA)	T023 (NEXTERA)	T029 (NYPA/NAT)	T030 (NYPA/NAT)	T032 (ITC)
Knickerbocker - Churchtown	14	21.9	21.9	21.9	21.9	21.9	21.9
Knickerbocker - Churchtown	15	21.9	21.9	21.9	21.9	21.9	21.9
Churchtown - Pleasant Valley	8	32.6	32.6	32.6	32.6	32.6	32.6
Churchtown - Pleasant Valley	10	32.6	32.6	32.6	32.6	32.6	32.6
Churchtown - Pleasant Valley	12	32.6	0	32.6	32.6	32.6	32.6
Churchtown - Pleasant Valley	13	32.6	0	32.6	32.6	32.6	32.6
Blue Stores Tap - Blue Stores	8	2.1	2.1	2.1	2.1	2.1	2.1
Total Miles of 115kV Removed		176.3	111.1	176.3	176.3	176.3	176.3

- 4.10.4. The Segment B proposals predominately affect NYSEG's Churchtown substation and Con Ed's Pleasant Valley substation with minor work at multiple National Grid substations.
 - Churchtown Substation
 - National Grid proposal T019 and NYPA/NAT' proposals T029 and T030 will replace the existing NYSEG Churchtown substation.
 - NextEra proposals T022 and T023 and ITC' proposal T032 retain the existing equipment.
 - No significant aging infrastructure is replaced by any proposal at Pleasant Valley.
 - No significant aging infrastructure is replaced by any proposal in the National Grid's substations.

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4.11. General Design Verifications

4.11.1. Substation Design and Arrangements

The review team compared the proposed bus arrangement for the substations proposed by the projects. Below are summary tables of the bus arrangement, number of lines, number of transformers and breakers for each substation.

Segment A

4.11.1.1. Edic 345 kV Substation

Base Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T018 NGRID/Transco	1	0	1	Breaker & Half	16 (1 new)
T021 NextEra	1	0	1	Breaker & Half	16 (1 new)
T026 NYPA/NAT	1	0	1	Breaker & Half	16 (1 new)
T031 ITC	1	0	1	Breaker & Half	16 (1 new)

Discussion

The bus arrangements are comparable for all base proposals. A 345 kV breaker is added to Bay #3 to create a new line terminal. All proposals, except proposal T031, shift the 345 kV line to Fraser from Bay #4 to Bay #3 making Bay #4 available for a new 345 kV line. For proposals T018, T021, and T026, the new 345 kV line is to New Scotland. For proposal T031, the new 345 kV line is to the proposed Princetown substation and will terminate in Bay #3.

Expandability

None of the base proposals provide any built-in expandability.

For proposal T027, it should be noted that a potential spare terminal position at Edic (shown on the Developer's drawings) in the proposed bay north of Bay #1 is already occupied by a 345 kV capacitor bank. Therefore, there is no built-in expandability.

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Replacement of Aging Infrastructure

NYPA/NAT T026 replaces two 345kV circuit breakers due to loading. At Marcy they are replacing three 345kV circuit breakers. It should be noted that National Grid has an extensive ongoing project to replace the existing control house, protection and control equipment, cabling, conduit and trench system, 345 kV breakers, and 345 kV-115 kV transformers.

Alternate Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T025 NYPA/NAT	1	0	1	Breaker & Half	16 (1 new)
T027 NYPA/NAT	2	0	2	Breaker & Half	18 (3 new)
T028 NYPA/NAT	1	0	1	Breaker & Half	16(1 new)

Discussion

Like the base proposals, except ITC proposal T031, these alternates all shift the 345 kV line to Fraser from Bay #4 to Bay #3 making Bay #4 available for a new 345kV line. For proposal T027, the Developer adds a bay north of Bay #1 for a new 345kV line to Princetown.

Expandability

Like the base proposals, none of the alternate proposals provide any built-in expandability.

Replacement of Aging Infrastructure

At Edic, NAT/NYPA T025, T027, and T028 are replacing two 345kV circuit breakers due to loading. At Marcy they are replacing three 345kV circuit breakers.

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4.11.1.2. New Scotland 345kV Substation

Base Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T018	1	0	1	Sectionalized	16 (5 new)
NGRID/Transco		U	1	Bus (3 sections)	
T021 NextEra	1	0	1	Sectionalized	16 (3 new)
	1	U	T	Bus (3 sections)	
T026 NYPA/NAT	1	0	1	Sectionalized	16 (3 new)
	1	U	T	Bus (3 sections)	
T031 ITC	1	0	1	Sectionalized	14 (1 new)
	1		1	Bus (2 sections)	

Discussion

The 345 kV yard at New Scotland has a sectionalized bus. The north main bus is the 99 Bus and the south main bus is the 77 Bus. The main bus is split by a redundant (back-to-back) tie breaker arrangement, which are breakers R81 and R82.

For all base proposals, one new 345 kV line terminal is added. The Developers place the new line terminal at various locations on the main bus. Proposals T018 and T021 place the new line terminal between tie breakers R81 and R82. Proposals T026 and T031 place the new line terminal on the south main bus (77 Bus).

Proposals T018, T021, and T026 increase reliability and operability by adding a second arrangement of redundant tie breakers to further sectionalize the bus creating a third main bus section (88 Bus). Proposals T018 and T021 create an 88 Bus by adding redundant tie breakers between R81 and R82. Proposal T026 creates an 88 Bus by adding redundant tie breakers south of the existing Leeds 93 line terminal.

For proposal T031, a new line terminal is added with no changes to the main bus.

Expandability

None of the base proposals provide any built-in expandability.

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Replacement of Aging Infrastructure

Proposal T018 replaces the existing R81 and R82 (oil) tie breakers with new SF6 units. Proposal T021 has the same electrical arrangement as T018, but the Developer does not propose replacing R81 and R82. Based on the review team's field review, these breakers will have to be relocated because there is insufficient room for the proposed arrangement. Thus, from a practical standpoint, R81 and R82 need to be replaced for proposal T021.

Proposals T026 and T031 do not replace any existing equipment.

Alternate Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T025 NYPA/NAT	0	0	0	Sectionalized Bus	13 (0 new)
T027 NYPA/NAT	2	0	2	Sectionalized Bus	17 (4 new)
T028 NYPA/NAT	1	0	1	Sectionalized Bus	16 (3 new)

Discussion

Proposal T025 does not add any new line terminals or circuit breakers. Proposals T027 and T028 create an 88 Bus by adding redundant tie breakers south of the existing Leeds 93 line terminal. For proposal T027, two new 345 kV line terminals are added to the 77 Bus. Proposal T028 adds one new line terminal to the 77 Bus.

Expandability

Proposal T025 provides some future expandability by creating one open 345 kV line terminal through the retirement of the 345 kV line to Alps. Proposals T027 and T028 do not provide any built-in expandability.

Replacement of Aging Infrastructure

None of the alternate proposals replace any existing equipment.

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4.11.1.3. Princetown Substation

Base Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker	# of Breakers
				Arrangement	
T018 NGRID/Transco	No Princeto	own Substation p	proposed.		
T021 NextEra	2 – 345kV 2 – 230kV	2	6	Breaker & Half	7 – 345kV 6 – 230kV
T026 NYPA/NAT	No Princeto	own Substation p	proposed.		
T031 ITC	8	0	8	Breaker & Half	12

Discussion

For proposals T021 and T031, a breaker-and-a-half configuration is proposed. Proposal T021 has three bays and proposal T031 has four bays. Potential issues with siting and constructing the Princetown substation were discussed in the Risk Analysis section above

Expandability

Proposal T021 provides two vacant line terminal positions by adding breakers to complete the breaker-and-a-half configuration. There is also sufficient land available at their proposed site for future expansion.

Proposal T031 does not provide any built-in expandability.

Replacement of Aging Infrastructure

There is no replacement of aging infrastructure, as Princetown would be a new substation on a greenfield site.

Alternate Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T025 NYPA/NAT	4	0	4	Ring Bus	4
T027 NYPA/NAT	6	0	6	Breaker & Half	9
T028 NYPA/NAT	4	0	4	Ring Bus	4

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Discussion

For alternate proposals T025 and T028, a four-breaker ring-bus configuration is proposed. For alternate proposal T027, NYPA/NAT propose a gas-insulated three-bay breaker-and-a-half configuration. Potential issues with siting the Princetown substation were discussed in the Risk Analysis section above.

Expandability

None of the proposals provide any built-in expandability.

Replacement of Aging Infrastructure

There is no replacement of aging infrastructure, as Princetown would be a new substation on a greenfield site.

4.11.1.4. Rotterdam Substation

Base Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker	# of Breakers
				Arrangement	
T018	2 – 345kV	1 – 345kV-	8	Breaker & Half	9 – 345kV
NGRID/Transco	1 – 230kV	230kV		(Gas-Insulated)	1 – 230kV
	2 – 115kV*	2 – 345kV-			
		115kV			
T021 NextEra	No changes to	Rotterdam propo	osed.		
T026	2 – 345kV	1 – 345kV-	8	Breaker & Half	8 – 345kV
NYPA/NAT	1 – 230kV	230kV			1 – 230kV
	2 – 115kV*	2 – 345kV-			
		115kV			
T031 ITC	2 – 345kV	2 – 345kV-	4	Sectionalized	3 – 345kV
		230kV		Bus	1 – 230kV

^{*}These are tie lines to the existing 115 kV yard at Rotterdam.

Discussion

Proposals T018 and T026 propose new 345 kV breaker-and-a-half substations at Rotterdam. These proposals also add two 345 kV-115 kV transformers and one 345 kV-230 kV transformer.

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Proposal T031 proposes adding a 345 kV sectionalized bus yard to the north side of the existing Rotterdam 230 kV yard.

Proposal T021 makes no changes to the existing Rotterdam bus arrangement.

It should be noted that National Grid's proposal T018 is the only one which does not impact the two existing natural gas transmission pipelines that share the National Grid electric transmission line ROW.

Expandability

Both proposals T018 and T026 provide one vacant line terminal position by adding a breaker to complete the breaker-and-a-half configuration. Proposal T031 does not provide any built-in expandability.

Replacement of Aging Infrastructure

For proposal T018, the new station replaces the existing north 230 kV yard and allows for the retirement of the south 230 kV yard. This provides an area to reconstruct the 115 kV yard as a full breaker-and-a-half station in the future.

For proposal T026, the new station removes the existing north and south 230 kV yards from service, providing an area to reconstruct the 115 kV yard as a full breaker-and-a-half station in the future.

For proposal T031, all existing 230 kV equipment remains in service. New equipment is added to the existing arrangement.

Alternate Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T025 NYPA/NAT	Same as	T026.			
T027 NYPA/NAT	Same as	T026.			
T028 NYPA/NAT	Same as	T026.			

Discussion

No further discussion beyond proposal T026 above.

Expandability

No further discussion beyond proposal T026 above.

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Replacement of Aging Infrastructure

No further discussion beyond proposal T026 above.

4.11.1.5. Remote Terminal Substations

Protection settings and minor equipment changes will be required at remote stations due to system re-configuration. Alps, Marcy, Porter, and Leeds substations are among the substations likely to be affected.

4.11.1.6. Terminal Upgrades

Various terminal upgrades are likely at project related substations and may result in the replacement of some equipment. The scope of work will be determined during the Facilities Study and detailed engineering.

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Segment B

4.11.1.7. Knickerbocker Substation

Base Proposals

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T019 NGRID/Tr ansco	3	0	3 (also includes Series Compensation)	Ring Bus (built for future Breaker & Half)	3
T022 NextEra	3	0	3	Ring Bus (built for future Breaker & Half)	3
T029 NYPA/NAT	3	0	3	Ring Bus (built for future Breaker & Half)	3
T032 ITC	3 – 345kV 3 – 115kV	0	6	345kV - Ring Bus 115kV – Ring Bus	3 – 345kV 3 – 115kV

Discussion

All Developers propose a new Knickerbocker Substation with similar 345 kV ring bus arrangements. Proposal T019 includes Series Compensation on the line terminal to Pleasant Valley. Proposal T032 adds an independent 115 kV ring bus yard.

Expandability

Proposals T019, T022, and T029 all provide one vacant line terminal position by adding one breaker to the ring bus, or by adding breakers to complete the breaker-and-a-half configuration.

Although proposal T032 does not provide any built-in expandability, ITC's layouts for both the 345 kV and 115 kV yards could easily be modified to provide a vacant line terminal position(s).

Replacement of Aging Infrastructure

There is no replacement of aging infrastructure, as Knickerbocker would be a new substation on a greenfield site.

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Alternate Proposals.

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker	# of Breakers
				Arrangement	
T023 NextEra	Same as T0	22.			
T025 NYPA/NAT	1 – 765kV 2 – 345kV	2	5	765kV – Ring Bus 345kV – Ring Bus	3 – 765kV 4 – 345kV
T030 NYPA/NAT	Same as TO	29.			

Discussion

Proposal T025 proposes a 765 kV ring bus yard and a 345 kV ring bus yard with two 765kV – 345kV transformers. Proposal T025 is a Segment A alternative proposal discussed in this section to keep with other Knickerbocker substation arrangements. Proposal T025 will also require the installation of a new 765 kV breaker and associated equipment at the Marcy Substation.

Expandability

Proposal T025 does not provide any built-in expandability.

Replacement of Aging Infrastructure

There is no replacement of aging infrastructure, as Knickerbocker would be a new substation on a greenfield site.

4.11.1.8. Churchtown Substation

Base Proposals.

Developer	# of new	# of new	Total new	Proposed	# of
	Lines	Transformers	elements	Breaker	Breakers
				Arrangement	
T019	5	0	5	Breaker & Half	8
NGRID/Transco					
T022 NextEra	5	0	5	Ring Bus	5
				(built for future	
				Breaker & Half)	
T029	5	0	5	Breaker & Half	8
NYPA/NAT					
T032 ITC	1	0	1	Straight Bus	4 (1 new)

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Discussion

Except for proposal T032, all Developers propose constructing new substations at Churchtown. Proposals T019 and T029 will eliminate the existing NYSEG Churchtown substation. Proposal T022 retains and connects to the existing NYSEG Churchtown substation.

Proposal T032 adds a line terminal to the existing NYSEG substation.

Expandability

Proposals T019 and T029 provide one vacant line terminal position by adding a breaker to complete the breaker-and-a-half configuration.

Proposal T022 provides one vacant line terminal position by adding a breaker to the ring bus.

Proposal T032 does not provide any built-in expandability.

Replacement of Aging Infrastructure

National Grid proposal T019 and NYPA/NAT proposal T029 will replace the existing NYSEG Churchtown substation. NextEra proposal T022 and ITC proposal T032 retain existing equipment.

Alternate Proposals.

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T023 NextEra	4	0	4	Ring Bus (built for future Breaker & Half)	4
T030 NYPA/NAT	Same as TO)29.			

Discussion

Similar to proposal T022, proposal T023 retains and connects to the existing NYSEG Churchtown substation. It differs from proposal T022 in that it eliminates one line terminal for the connection to Pleasant Valley substation.

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Expandability

Proposal T023 does not provide any built-in expandability. However, there are provisions for future disconnect switches and breakers to convert the ring bus to a breaker-and-a-half configuration. This will allow a third bay to be added to the north side of the substation.

Replacement of Aging Infrastructure

NYPA/NAT proposal T030 will replace the existing NYSEG Churchtown substation. NextEra proposal T023 retains existing equipment.

4.11.1.9. Pleasant Valley Substation

Base Proposals.

Developer	# of	# of new	Total new	Proposed	# of
	new	Transformers	elements	Breaker	Breakers
	Lines			Arrangement	
T019 NGRID/Transco	1	0	1 (Also includes (2) capacitor banks)	Breaker & Half	11 (1 new)
T022 NextEra	1	0	1	Breaker & Half	11 (1 new)
T029 NYPA/NAT	1	0	1	Breaker & Half	11 (1 new)
T032 ITC	1	0	1	Breaker & Half	11 (1 new)

Discussion

Proposals T019, T022 and T029 add a 345 kV breaker to Bay #2 to complete the breaker-and-a-half configuration. This provides a new terminal for relocation of the 345 kV Long Mountain line to Bay #2. The vacant terminal in Bay #3 is then available for the proposed 345 kV line from Knickerbocker. This solution eliminates the new Knickerbocker line crossing the Long Mountain line.

Similarly, proposal T032 adds a 345 kV breaker to Bay #2 to complete the breaker-and-a-half configuration. The Bay #2 terminal is then available for the proposed 345 kV line from Knickerbocker. This solution makes it necessary for the new Knickerbocker line to cross the Long Mountain line.

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Expandability

The proposals do not provide any built-in expandability.

Replacement of Aging Infrastructure

The proposal does not replace any existing equipment.

Potential Additional Upgrade Required for Proposals to Connect to Pleasant Valley Substation

As stated above, all of the proposals for Segment B propose to occupy Bay #2 at the Pleasant Valley Substation. However, based upon the current NYISO interconnection queue, the Cricket Valley Energy Center (CVEC) project—a 1,110 MW natural gas fired generator located in Dover, New York-- also proposes to interconnect at the Pleasant Valley substation by adding a breaker to Bay #2 completing the breaker-and-a-half configuration.

Currently, the CVEC project is being studied in the NYISO's 2017 Class Year. In the event that the CVEC project accepts its cost allocation from the 2017 Class Year, the proposed project selected by the NYISO will be required to expand the Pleasant Valley Substation to interconnect. Given that such potential upgrades will be similar across all of the proposals, the cost of these potential upgrades has not been included in the independent cost estimates.

Alternate Proposals.

Developer	# of new Lines	# of new Transformers	Total new elements	Proposed Breaker Arrangement	# of Breakers
T023	Same as To	022.			
NextEra					
T030	Same as TO	029.			
NYPA/NAT					

Discussion, Expandability and Replacement of Aging Equipment Refer to paragraphs under Base Proposal.

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4.11.1.10. Schodak Substation

Proposals T019, T029 and T030 add 115 kV line breakers. The other proposals do not propose changes at the Schodak substation.

4.11.1.11. Remote Terminal Substations

Protection settings and minor equipment changes will be required at remote substations due to system re-configuration. Greenbush, Milan, Lafarge, North Catskill, Hudson, and Pleasant Valley 115 kV substations are among the substations likely affected.

4.11.1.12. Terminal Upgrades

Various terminal upgrades are likely at project-related substations and may result in the replacement of some equipment. The scope of work will be determined during the Facilities Study and detailed engineering.

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4.11.2. Transmission Line Design Comparisons

4.11.2.1. Proposed Line Design

The following tables show the Transmission Line Designs proposed by each Developer:

Segment A

I,			LINE		NUMBER	CONDUCTOR		TOTAL	STRUCT	URE TYPE	
PROPOSAL	DEVELOPER	SECTOR	LINE LENGTH (Miles)	VOLTAGE (KV)	OF CIRCUIT	ТҮРЕ	NO/PH	STEEL MONO POLE	STEEL H-POLE	CONCRETE MONO POLE	COMMENTS
	National Caid	Edic SS to Princetown Jct.	66.8	345	1	954kcmil CARDINAL ACSS	2	45	316		Edic SS to 12.6 miles - 1 Ckt Reconductoring only
T018	National Grid and NYTransco	Princetown Jct. to New Scotland SS	19.7	345	1	954kcmil CARDINAL ACSS	2	59	70		2.5 Miles-2 Ckts, 345kV & 115kV Line#13
		Princetown Jct. to Rotterdam SS	5.0	345/345	2	954 kcmil CARDINAL ACSS	2	85			
		Edic SS to Princetown Jct.	66.8	345	1	1033.5kcmil CURLEW ACSS	2	10		515	Edic SS to 12.6 miles - 1 Ckt Reconductoring only
T021	NextEra	Princetown Jct. to New Scotland SS	19.9	345	1	1033.5kcmil CURLEW ACSS	2	7		130	2.5 Miles-2 Ckts, 345kV & 115kV Line#13
		Princetown Jct. to Rotterdam SS	4.2	345/345	2	1033.5kcmil CURLEW ACSS	2	8		72	
		Princetown Jct. to Rotterdam SS	0.8	230/230	2	1033.5kcmil CURLEW ACSS	1	34			
		Marcy to Church Rd and New Scotland Bypass	2.7	765	1	1351.5kcmil DIPPER ACSR	4	6	10		Edic SS to 12.6 miles - 1 Ckt Reconductoring only
T025	025 NYPA and NAT	Edic SS to Princetown Jct.	66.8	345	1	954kcmil CARDINAL ACSS	2	62	274		2.5 Miles-2 Ckts, 345kV & 115kV Line#13
		Princetown Jct. to New Scotland SS	19.7	345	1	954kcmil CARDINAL ACSS	2	66	61		
		Princetown Jct. to Rotterdam SS	5.0	345/345	2	954kcmil CARDINAL ACSS	2	74			
		Edic SS to Princetown Jct.	66.8	345	1	954kcmil CARDINAL ACSS	2	62	274		Edic SS to 12.6 miles - 1 Ckt Reconductoring only
T026	NYPA and NAT	Princetown Jct. to New Scotland SS	19.7	345	1	954kcmil CARDINAL ACSS	2	66	61		
		Princetown Jct. to Rotterdam SS	5.0	345/345	2	954kcmil CARDINAL ACSS	2	74			
		Edic SS to Princetown Jct.	78.6	345/345	2	954kcmil CARDINAL ACSS	2	391			Edic SS to 12.6 miles - 1 Ckt Reconductoring only
T027	NYPA and NAT	Princetown Jct. to New Scotland SS	19.7	345/345	2	954kcmil CARDINAL ACSS	2	128			2.5 Miles-2 Ckts, 345kV & 115kV Line#13
		Princetown Jct. to New Scotland SS	6.3	345	1	954kcmil CARDINAL ACSS	2	38			
		Princetown Jct. to Rotterdam SS	5.0	345/345	2	954kcmil CARDINAL ACSS	2	74			
		Edic SS to Princetown Jct.	66.8	345	1	954kcmil CARDINAL ACSS	2	62	274		Edic SS to 12.6 miles - 1 Ckt Reconductoring only
T028	NYPA and NAT	Princetown Jct. to New Scotland SS	19.7	345	1	954kcmil CARDINAL ACSS	2	66	61		2.5 Miles-2 Ckts, 345kV & 115kV Line#13
		Princetown Jct. to Rotterdam SS	5.0	345/345	2	954kcmil CARDINAL ACSS	2	74			
		Edic SS to Princetown Jct.	67.2	345	1	954kcmil CARDINAL ACSR	2	42	403		Edic SS to 12.6 miles - 1 Ckt Reconductoring only
T031	ITC	Princetown Jct. to New Scotland SS	19.7	345/345	2	954kcmil CARDINAL ACSR	2	145			
		Princetown Jct. to Rotterdam SS	5.0	345/345	2	954kcmil CARDINAL ACSR	2	8	93		

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Segment B

۳			LINE			CONDUCTOR		TOTAL	STRUCTU	JRE TYPE	
PROPOSAL	DEVELOPER	SECTOR	LENGTH VOLTAGE OF		OF CIRCUIT	TYPE NO/PH		STEEL MONO POLE	STEEL H-POLE	CONCRETE MONO POLE	COMMENTS
	National Grid	Knickerbocker to Churchtown SS	21.9	115/345	2	954kcmil CARDINAL ACSS	2	163	7		
T019	and	Churchtown SS to Pleasant Valley SS	32.3	115/345	2	954kcmil CARDINAL ACSS	2	231			
	NYTransco	Blue Stores Jct to Blue Stores SS	2.1	115	1	795kcmil DRAKE ACSR	1		24		
		Knickerbocker to Churchtown SS	21.9	115/345	2	1033.5kcmil CURLEW ACSS	2	14		145	
T022	NextEra	Churchtown SS to Pleasant Valley SS	32.3	345	1	1033.5kcmil CURLEW ACSS	2	17		229	
		Blue Stores Jct to Blue Stores SS	2.1	115	1	795kcmil DRAKE ACSR	1		24		
		Knickerbocker to Churchtown SS	21.9	115/345	2	1033.5kcmil CURLEW ACSS	2	14		145	
T023	NextEra	Churchtown SS to Pleasant Valley SS	32.3	115/345	2	1033.5kcmil CURLEW ACSS	2	21		229	
		Blue Stores Jct to Blue Stores SS	2.1	115	1	795kcmil DRAKE ACSR	1		24		
		Knickerbocker to Churchtown SS	21.9	115/345	2	954kcmil CARDINAL ACSS	2	161			
T029	NYPA and NAT	Churchtown SS to Pleasant Valley SS	32.3	115/345	2	954kcmil CARDINAL ACSS	2	244			
		Blue Stores Jct to Blue Stores SS	2.1	115	1	795kcmil DRAKE ACSR	1		24		
		Knickerbocker to Churchtown SS	21.9	115/345	2	477kcmil HAWK ACSS	3	161			
T030	NYPA and NAT	Churchtown SS to Pleasant Valley SS	32.3	115/345	2	477kcmil HAWK ACSS	3	244			
		Blue Stores Jct to Blue Stores SS	2.1	115	1	795kcmil DRAKE ACSR	1		24		
		Knickerbocker to Churchtown SS	21.9	115/345	2	954kcmil CARDINAL ACSR	2	158	14		
T032	ITC	Churchtown SS to Pleasant Valley SS	32.1	115/345	3	954kcmil CARDINAL ACSR	2	19	279		2x115 kV and 1X345kV Circuits
		Blue Stores Jct to Blue Stores SS	2.1	115	1	795kcmil DRAKE ACSR	1		24		

4.11.2.2. Proposed ROW

All of the transmission line proposals were evaluated to verify that they adequately fit within existing ROW corridors. The evaluation was based on conductor swingout using maximum blow out at 6 psf wind, maximum deflection and electrical clearance requirements. All proposals were found to be adequate.

4.11.2.3. **Clearances**

Electrical clearance to ground was checked to ensure compliance with NESC requirements. All proposed designs exceed NESC minimum clearances with a two to three foot margin. Including at least a two foot additional buffer in the design is good utility practice for construction tolerances and survey adjustments/errors.

4.11.2.4. **EMF**

The existing corridor (345 kV Lines #14 and #18, and 115kV Line #13) between Princetown Junction and New Scotland Substation is currently estimated to exceed NYPSC guidelines for EMF levels. The designs for proposals T018, T021, T026, and T028 improve the condition, but EMF levels are still estimated to exceed the guidelines.

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Additionally, proposal T025 proposed conversion of the 345 kV line between Marcy substation and proposed Knickerbocker substation to 765 kV will likely increase EMF levels beyond NYPSC guidelines. Proposal T027 appears to mitigate the EMF exceedance. The following table summarises the EMF results provided by the developers and the estimated additional ROW required to mitigate the EMF levels.

			LINE			EMF					
PROPOSAL	Developer				Corridor	RC	@ Edge of DW	Estimated Additional ROW Requirement			
PRO		Sector	Voltage (kV)	Length (miles)	Corridor Width (ft.)	Max. Electric Field (kV/m)	Max. Magnetic Field (mG)	Width (ft.)	Area (Acres)		
			345	6.3	370	1.9	94.6	10	7.6		
∞	National Grid and	Princetown Jct. to New	345	4.3	590	1.9	59.2	10	5.2		
T018	NYTransco	Scotland SS	345/115	2.5	450	1.9	83.4	10	3.0		
'	INT TTUINGE		345	6.6	590	1.9	59.2	10	8.0		
				19.7					23.9		
			345	6.5	370	1.7	140.0	10	7.9		
Σ.	NextEra Energy	Era Energy Princetown Jct. to New Scotland SS	345	4.3	590	1.8	150.0	10	5.2		
T021			345/115	2.5	450	1.8	150.0	10	3.0		
			345	6.6	590	1.8	170.0	10	8.0		
			705	19.9	470	0.0	50.0		24.1		
			765	0.4	470	0.3	50.0	0.5	0.0		
			765 765	1.3 33.7	675 360-380	2.7	125.0	25	4.0 93.8		
			765	2.0	570	2.6	161.0	23	5.5		
			765	27.7	345-380	2.0	101.0	23	77.2		
			765	6.3	370	2.7	212.0	23 25	19.1		
			765	4.3	590	2.6	148.0	23	11.9		
2	NYPA / NAT	Marcy SS to Knickerbocker	765	2.5	450	2.7	188.0	25	7.6		
T025			765	6.1	590	2.6	148.0	23	17.1		
'			765	1.0	615	1.4	119.0	23	0.0		
			765	1.9	615	0.2	27.0		0.0		
			765	1.1	400	0.5	232.0		0.0		
			765	1.5	400	1.9	100.0	9	1.6		
			765	5.1	250	1.7	92.0	8	5.0		
			765	3.0	750	0.4	187.0	Ů	0.0		
				97.9					242.9		
- 80			345	6.3	370	1.8	208.0	10	7.6		
T026 & T028		Dringotown let to No	345	4.3	590	1.9	150.0	10	5.2		
~	NYPA / NAT	Princetown Jct. to New	345/115	2.5	450	1.9	188.0	10	3.0		
026		Scotland SS	345	6.6	590	1.8	185.0	10	8.0		
Ĕ				19.7					23.9		
			345	6.3	370	1.3	123.0		0.0		
_		Princetown Jct. to New	345	4.3	590	1.2	122.0		0.0		
T027	NYPA / NAT	Scotland SS	345/115	2.5	450	1.2	124.0		0.0		
		Gootana GO	345	6.6	590	1.2	122.0		0.0		
				19.7					0.0		
			345	6.3	370	<1.0	<100	10	7.6		
_		Princetown .lct to New	345	4.3	590	-	-	10	5.2		
T031	ITC	Princetown Jct. to New Scotland SS	345/115	2.5	450	-	-	10	3.0		
'-	8		345	6.6	590	-	-	10	8.0		
				19.7					23.9		

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4.11.2.5. Transmission Line Conductor Ampacity Ratings

The following tables show a summary of the proposed line lengths, conductor types and conductor ratings for each proposal. No concerns were identified with the proposed conductor types and sizes.

Segme	nt A							SECO CA	ALCULATED	
, r						CONDUCTOR		STEADY		
PROPOSAL	DEVELOPER	SECTOR	Line Length (Miles)	ength (KV) OF LINE		TYPE NO/PH		STATE THERMAL RATING (AMPS)	MAL RATING (MVA)	
		Edic SS to Rotterdam SS	71.8	345	1	954kcmil CARDINAL ACSS	2	4072.8	2433.7	
T018	National Grid and NYTransco	Edic SS to New Scotland SS	86.5	345	1	954kcmil CARDINAL ACSS	2	4072.8	2433.7	
		Rotterdam SS to New Scotland SS	24.7	345	1	954kcmil CARDINAL ACSS	2	4072.8	2433.7	
		Edic SS to Princetown SS	71.0	345	1	1033.5kcmil CURLEW ACSS	2	4293.2	2565.4	
		Edic SS to New Scotland SS	86.7	345	1	1033.5kcmil CURLEW ACSS	2	4293.2	2565.4	
T021	NextEra	Princetown SS to Rotterdam SS	0.8	230	1	1033.5kcmil CURLEW ACSS	1	2147.0	855.3	
		Princetown SS to Rotterdam SS	0.8	230	1	1033.5kcmil CURLEW ACSS	1	2147.0	855.3	
		Edic SS to Rotterdam SS	71.8	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
T025	NYPA and NAT	Edic SS to New Scotland SS	86.5	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
T025		Rotterdam SS to New Scotland SS	24.7	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
		Marcy to New Scotland SS	85.7	765	1	1351.5kcmil DIPPER ACSR	4	3210.0	4253.3	
		Edic SS to Rotterdam SS	71.8	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
T026 & T028	NYPA and NAT	Edic SS to New Scotland SS	86.5	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
1020		Rotterdam SS to New Scotland SS	24.7	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
		Edic SS to Rotterdam SS	71.8	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
		Edic SS to New Scotland SS	86.5	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
T027	NYPA and NAT	Edic SS to New Scotland SS #2	86.5	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
		Rotterdam SS to New Scotland SS	24.7	345	1	954kcmil CARDINAL ACSS	2	3678.2	2197.9	
		Edic SS to Rotterdam SS	72.2	345	1	954kcmil CARDINAL ACSR	2	3162.0	1889.5	
T031	ITC	Edic SS to New Scotland SS	86.9	345	1	954kcmil CARDINAL ACSR	2	3162.0	1889.5	
		Rotterdam SS to New Scotland SS	24.7	345	1	954kcmil CARDINAL ACSR	2	3162.0	1889.5	

Results based on Conductor Maximum temperature and Ambient temperature as shown in table above, Absorptivity and Emissivity 0.6 and Wind 3 ft/sec.

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Segn	nent B							SECO CA	LCULATED
٩٢			Line			CONDUCTOR		STEADY STATE	CONDUCTOR
PROPOSAL	DEVELOPER	SECTOR	Length (Miles)	VOLTAGE (KV)	NUMBER OF LINE	ТҮРЕ	NO/ PH	THERMAL RATING (AMPS)	RATING (MVA)
		Knickerbocker to Pleasant Valley	54.2	345	1	954kcmil CARDINAL ACSS	2	3910.0	2336.4
T019	National Grid and NYTransco	Knickerbocker to Pleasant Valley	54.2	115	1	954kcmil CARDINAL ACSS	1	1955.0	389.4
		Blue Stores Jct to Blue Stores SS	2.1	115	1	795kcmil DRAKE ACSR	1	1364.5	271.8
тозз	NextEra	Knickerbocker to Pleasant Valley	54.2	345	1	1033.5 CURLEW ACSS	2	3440.0	2055.6
T022	Nextera	Knickerbocker to Churchtown	21.9	115	1	795kcmil DRAKE ACSS	1	1495.0	297.8
T023	NextEra	Knickerbocker to Pleasant Valley	54.2	345	1	1033.5 CURLEW ACSS	2	3440.0	2055.6
1023	Nextera	Knickerbocker to Pleasant Valley	54.2	115	1	795kcmil DRAKE ACSS	1	1495.0	297.8
T020	NVDA and NAT	Knickerbocker to Pleasant Valley	54.2	345	1	954kcmil CARDINAL ACSS	2	3882.8	2320.2
T029	NYPA and NAT	Knickerbocker to Pleasant Valley	54.2	115	1	954kcmil CARDINAL ACSS	1	1941.4	386.7
T030	NYPA and NAT	Knickerbocker to Pleasant Valley	54.2	345	1	477kcmil HAWK ACSS	3	4195.8	2507.2
1030	NYPA and NAT	Knickerbocker to Pleasant Valley	54.2	115	1	954kcmil CARDINAL ACSS	1	2126.1	423.5
		Knickerbocker to Pleasant Valley	54.0	345	1	954kcmil CARDINAL ACSR	2	3162.0	1889.5
T032		Knickerbocker to Pleasant Valley	54.0	115	1	954kcmil CARDINAL ACSR	1	1581.0	314.9
		Churchtown to Pleasant Valley	32.1	115	1	954kcmil CARDINAL ACSR	1	1581.0	314.9

Results based on Conductor Maximum temperature and Ambient temperature as shown in table above, Absorptivity and Emissivity 0.6 and Wind 3 ft/s

4.11.2.6. Structure Heights

In its December 17, 2015 Order, the NYPSC noted that it "will not mandate criteria to be applied by the NYISO, but all proposers of transmission solutions should be aware as they prepare their submissions that minimization of structure heights will be an important issue in the siting review process so applicants should be careful to not lock themselves into designs that could not later be approved. All applicants are encouraged to minimize the heights of the proposed structures while keeping them within the context of their 2015 proposals. In making this statement, the Commission is not in any way suggesting that it would be suitable for applicants to appropriate the structure designs of other applicants."

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The following tables summarize the structure height increase for each proposal based on the percent increase in height from the existing line.

SEGMENT A			Percent of S	Structures		
	T018	T021	T025	T026/T028	T027	T031
1. Less than 0 ft.	10.8%	0.0%	48.6%	50.1%	3.0%	4.1%
2. Same Ht.	1.6%	0.0%	1.3%	1.3%	1.7%	84.1%
3. From 0.1ft to 5 ft.	5.2%	0.4%	9.2%	9.5%	12.0%	10.0%
4. From 5.1 ft to 10 ft.	9.7%	0.6%	6.0%	6.1%	0.8%	1.4%
5. From 10.1 ft to 15 ft.	12.5%	5.8%	6.3%	6.3%	7.4%	0.0%
6. From 15.1 ft to 20 ft.	16.9%	9.3%	11.8%	12.3%	6.3%	0.3%
7. From 20.1 ft to 25 ft.	12.9%	63.1%	6.9%	7.1%	10.9%	0.1%
8. From 25.1 ft to 30 ft.	11.8%	8.6%	1.6%	1.7%	32.3%	0.0%
9. From 30.1 ft to 40 ft.	9.0%	8.6%	3.3%	3.4%	15.1%	0.0%
10. From 40.1 ft to 50 ft.	3.7%	2.7%	1.8%	1.7%	5.4%	0.0%
11. From 50.1 ft to 60 ft.	4.0%	0.5%	1.1%	0.2%	3.5%	0.0%
12. From 60.1 to 70 ft.	1.4%	0.1%	0.2%	0.0%	0.2%	0.0%
13. From 70.1 to 80 ft.	0.3%	0.1%	0.2%	0.2%	0.6%	0.0%
14. From 80.1 to 90 ft.	0.0%	0.0%	0.9%	0.0%	0.6%	0.0%
15. From 90.1 to 100 ft.	0.2%	0.0%	0.5%	0.2%	0.0%	0.0%
16. From 100.1 to 110 ft.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
17. From 110.1 to 120 ft.	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%

SEGMENT B	Percent of Structures					
	T019	T022	T023	T029/T030	T032	
1. Less than 0 ft.	21.7%	12.1%	1.5%	54.8%	51.1%	
2. Same Ht.	0.7%	0.2%	0.5%	19.0%	1.3%	
3. From 0.1ft to 5 ft.	24.2%	14.3%	14.7%	10.9%	46.4%	
4. From 5.1 ft to 10 ft.	26.9%	44.7%	27.9%	10.9%	1.3%	
5. From 10.1 ft to 15 ft.	16.5%	28.6%	55.5%	3.0%	0.0%	
6. From 15.1 ft to 20 ft.	5.0%	0.0%	0.0%	0.7%	0.0%	
7. From 20.1 ft to 25 ft.	3.0%	0.0%	0.0%	0.2%	0.0%	
8. From 25.1 ft to 30 ft.	1.0%	0.0%	0.0%	0.0%	0.0%	
9. From 30.1 ft to 40 ft.	1.0%	0.0%	0.0%	0.0%	0.0%	
10. From 60.1 ft to 70 ft.	0.0%	0.0%	0.0%	0.5%	0.0%	

There is a tradeoff between structure height and number of structures and also between structure height and use of ROW width. A discussion of how structure height relates to visual impact is contained in the Environmental section of this report.

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4.11.2.7. Structural Design Criteria

The transmission line structural design criteria were evaluated for all of the proposals. The following table summarizes the criteria used. All proposals meet minimum standards as defined by the 2017 version of the National Electric Safety Code Section 25 for this region of the country and are within the guidelines of the Third Edition of ASCE's Manual 74 "Guidelines for Electrical Transmission Line Structural Loading".

DESIGN CRITERIA REQUIREMENT COMPARISON FOR THE TRANSMISSION LINE DESIGNS

		STANDARD REQIREMENTS					
Case No.	Case Description	Wind Load (mph)	Radial Thickness of ice (inches)	Temp (°F)	Standard		
1	NESC Heavy	39.5	0.5	0	NESC - 250B		
2	Extreme Wind 1	90	0	60	NESC - 250C		
3	Extreme Ice and Wind	40	0.75	15	NESC - 250D		
4	Extreme Ice	,	>		Not Required by NESC or ASCE Loading Guideline 74		

COMPARISON WITH DEVELOPER'S DESIGN CRITERIA					
National Grid/ NY Transco	NextEra	NYPA/NAT	ITC		
Ok	Ok	Ok	Ok		
Ok 1	Ok 1	Exceeds (100MPH)	Exceeds (100MPH)		
Ok	Ok	Ok	Ok		
1.5" Ice & 2psf Wind (structure overload factor of 1.1)	1.5" Ice & Opsf Wind (structure overload factor of 1.0)	1" Ice & 0psf Wind (structure overload factor of 1.0)	1" Ice & 0psf Wind (structure overload factor of 1.0)		

¹ Columbia County & <u>Dutchess</u> County are in the "Special Wind Region" as defined by the NESC. NYPA/NAT & ITC address this by exceeding the requirements of 250C. It is likely that the NESC 250D load case and/or the Extreme Ice case will control the design for National Grid & <u>Nextera</u> which will adequately address any special wind concerns.

The National Grid/Transco proposals T018 and T019 include noticeably heavier duty structures and foundations than other similar proposals. As stated in their proposal, their design "uses significantly heavier ice loadings than required by code and implements several techniques to mitigate cascading structure failures." Use of these more stringent design criteria does result in higher transmission line structure and foundation costs.

It was also observed that National Grid's proposal uses more concrete foundations than NYPA/NAT. To ensure that NYPA/NAT were not under designing their foundations, SECo completed a spot check of the NYPA/NAT foundation designs using the geotechnical data that they provided. SECo found that NYPA/NAT's proposed foundations to be adequate.

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4.11.2.8. Potential Issues with Conversion of Line to 765 kV

A preliminary assessment was completed of the feasibility of the NAT/NYPA 765 KV option T025 proposal. The assessment is based on data provided in NAT/NYPA's proposal and as obtained from Developer and National Grid responses to RFIs. SECo concludes that the conversion of the line is technically feasible. However, as suggested in the NAT/NYPA's "765KV Conversion Feasibility Study" document, additional detailed engineering study, survey and field testing must be performed prior to implementation of the project. The review team also believe that the final cost of this conversion may vary widely depending on the potential remedial work recommended as the result of more detailed study. NAT/NYPA have provided rough estimates to indicate possible range of costs.

The assessment focused on the following technical criteria:

- Condition of Existing Transmission Line The existing transmission line is approximately 40 years old and has been operated at 345KV since its construction. Based on visual observation of portions of the line it appears that the line has been well maintained and is in very good physical condition.
- Clearances NAT/NYPA has obtained Lidar data for roughly 1/3 of the existing line length to be converted to 765KV operation. They state that they have evaluated that data and determined that their proposal will meet current day clearance standards. SECo also reviewed the Lidar data and concurs. SECo has obtained PLSCadd files for the proposed line from NYPA/NAT and found the design line to ground clearance on the line is 44ft. The minimum calculated ground clearance requirement for 765KV line based on NESC 2012- Rule 232C1a and Table 232-1 is 33.2ft. The maximum operating temperature of the line as proposed by the Developer will be less than the original design operating temperature of the line. Based on the information put forth by NAT/NYPA and our own evaluation of the partial data received from National Grid, we agree that ground clearance should not be an issue, with the exception of one span between Smith Hill Road and Newport Road. Our independent cost estimate doesn't include any dollars to correct clearance issues.
- Insulation NAT/NYPA has evaluated the insulation of the existing line and
 documents their findings in their 765KV conversion feasibility study. They
 show that the insulation level and air gaps are adequate for 765KV operation
 and plan to confirm their findings by performing a system transient analysis
 study. Our independent cost estimate doesn't include any dollars to correct
 insulation issues.

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- EMF NAT/NYPA has provided an assessment regarding EMF requirements and has calculated the amount of additional easement required to address EMF needs. Our independent cost estimate includes the cost of the additional EMF easements required.
- Corona There is concern that corona may likely be an issue with the existing line construction. SECo has contacted a major conductor hardware supplier and learned that some improvements have been made to the corona performance of transmission line hardware since the existing line was constructed. SECo doesn't have drawings that show the hardware used in the existing construction. Based on photos, taken at several locations throughout the line, it doesn't appear that the line was constructed with corona rings. Remedial work may be required to correct corona issues on the existing line. A Rough cost estimate was completed to potentially mitigate corona if detailed engineering study confirms the need.. The estimate is to replace hardware (not including insulators) on 83 miles of the existing line and completely rebuild approximately 13 miles of the existing line between Mk-J and Knickerbocker. The rebuild of the 13 mile section might be required since that section was originally constructed with a bundle of three conductors per phase while the remaining line was constructed with a 4 bundle per phase. These costs have been included as a network upgrade in the independent estimate.

4.11.2.9. Use of Concrete Poles

NextEra proposes to use concrete poles. Due to the length and weight of concrete poles careful planning during detailed engineering will be required to develop delivery and construction plans for each pole site. NextEra has provided documentation demonstrating that they and the proposed supplier have investigated the logistics of the pole delivery and installations. This investigation includes field reviews, production schedules; as well as delivery methods and routes. In general we find that the preliminary field review process and planning has considered many of the issues/obstacles that may be confronted during delivery and construction. The Developer's plan has considered some of the concerns associated with transport, public protection and community impacts. And the option to utilize multi-piece steel poles provides a clear mitigation for problem areas. But as with all project risks, early detection, planning and mitigation are key to avoiding unexpected and untimely schedule and financial impacts. We would recommend a more detailed and robust plan and risk mitigation be developed during detailed engineering.

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4.11.2.10. Operations Concerns

4.11.2.10.1. Transmission Line Crossings

Overhead Transmission line wire crossings could be an area of risk due to the possibility of an upper circuit failing and falling into a lower circuit (or circuits) below.

- At Edic most developers have proposed to relocate the existing Fraser line into a new bay and terminate the new line in the vacated Fraser terminal.
 ITC instead terminates the new line into the new terminal and crosses the Fraser line.
- A similar situation applies to the Pleasant Valley substation, where all
 Developers except ITC propose to relocate the existing Long Mountain line
 to a new bay allowing the new line to terminate without a crossing.
- At the New Scotland substation, National Grid/Transco and NextEra propose to cross the existing Blenheim Gilboa to New Scotland (Line #672) and New Scotland to Leeds (Line# 686) 345kV lines to terminate at the New Scotland substation

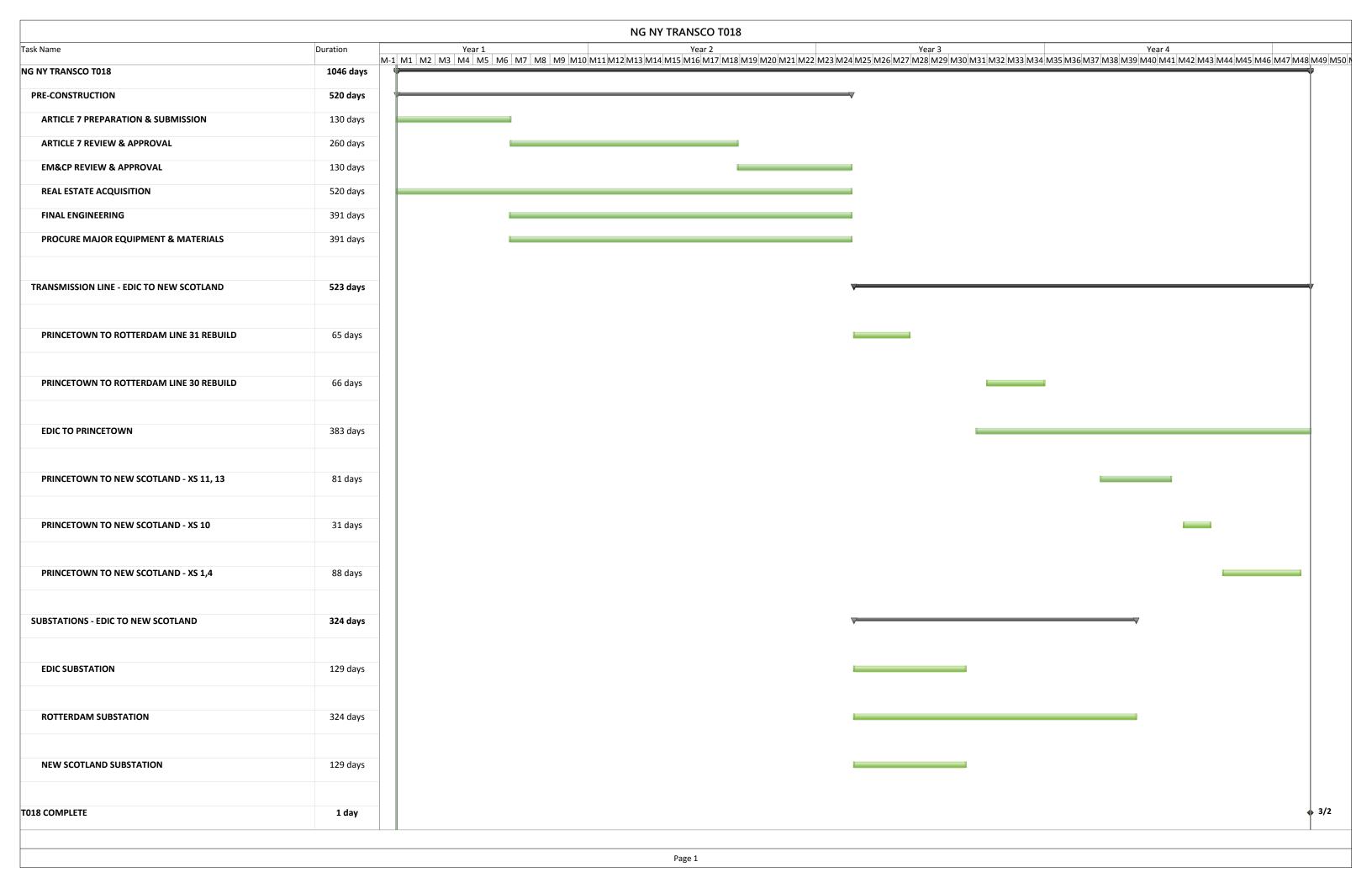
4.11.2.10.2. Triple Circuit Concerns

ITC's Segment B proposal T032 proposes using triple circuit structures between Churchtown Substation and Pleasant Valley Substation. The proposed structures are in a two-pole configuration with one 345 kV circuit attached horizontally to an upper crossarm and two 115 kV circuits attached side by side horizontally to a lower crossarm. The proposed compact design conserves space within the transmission corridor but creates an operational concern. Future maintenance of the transmission circuits and associated structures may depend on the outage availability of all the circuits attached. A maintenance plan must be developed prior to putting this configuration into service.

Client:	NYISO		
Project:	AC Transmission Project Evaluation	SECO SUBSTATION ENGINEERING	
Subject:	Report Draft	COMPANY	
Document No.:	AC Transmission Report 04 23 18	Revision:	4

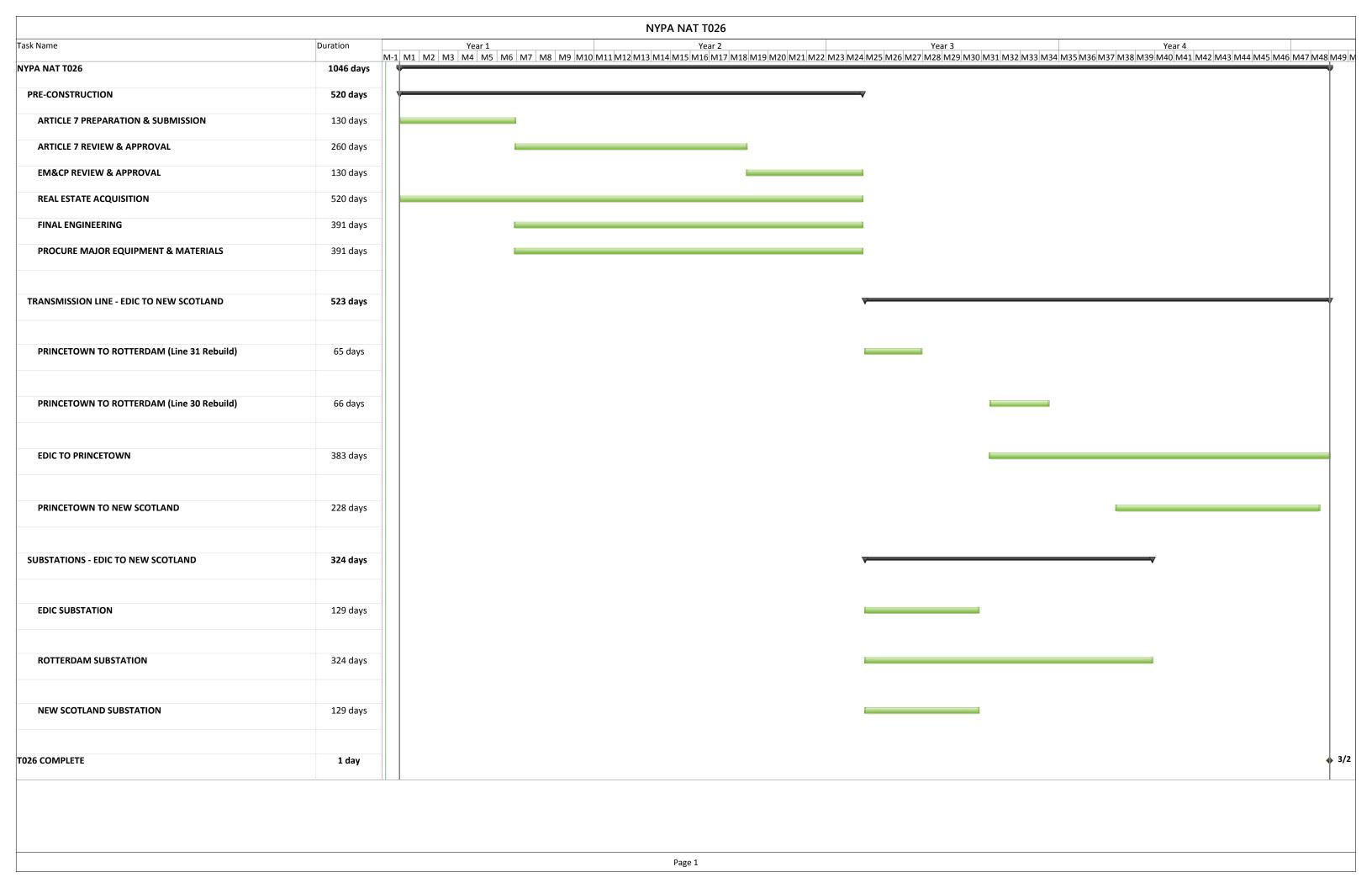
5. Attachments

- 5.1. Attachment A Schedule Gantt Charts
- **5.2.Attachment B -Independent Estimates**
 - 5.2.1. National Grid (NGRID) (T018)
 - 5.2.2.NextEra Energy Transmission New York (T021)
 - 5.2.3.North America Transmission/New York Power Authority (NAT/NYPA) 765kV Proposal #1 (T025)
 - 5.2.4.North America Transmission/New York Power Authority (NAT/NYPA) Base Proposal (T026)
 - 5.2.5.North America Transmission/New York Power Authority (NAT/NYPA) Double Circuit (T027)
 - 5.2.6.North America Transmission/New York Power Authority (NAT/NYPA) Enhanced (T028)
 - 5.2.7.ITC (T031)
 - 5.2.8. National Grid (NGRID) (T019)
 - 5.2.9.NextEra Energy Transmission New York (T022)
 - 5.2.10. NextEra Energy Transmission New York Alternative (T023)
 - 5.2.11. North America Transmission/New York Power Authority (NAT/NYPA) Base (T029)
 - 5.2.12. North America Transmission/New York Power Authority (NAT/NYPA) Enhanced (T030)
 - 5.2.13. ITC (T032)

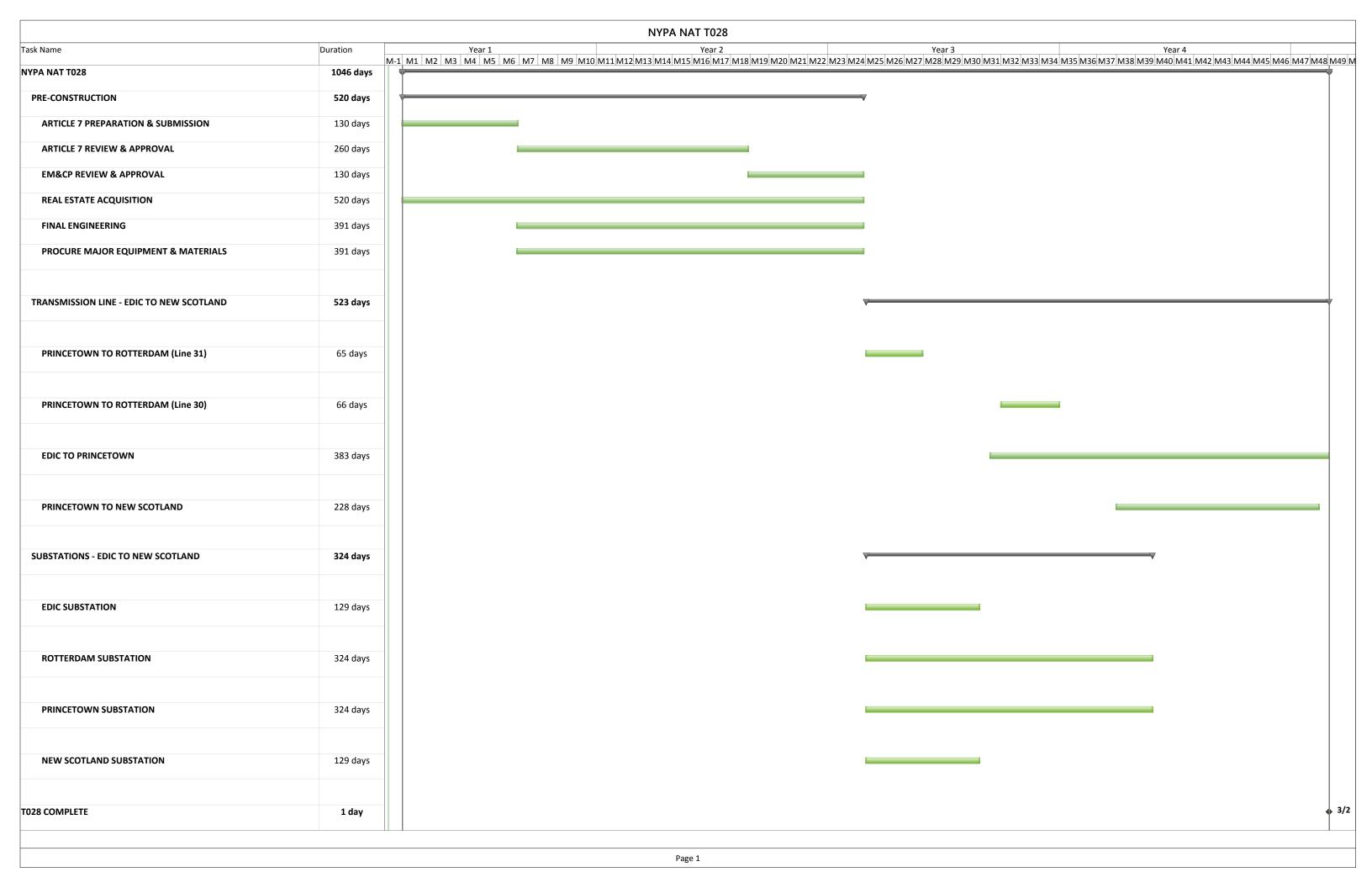


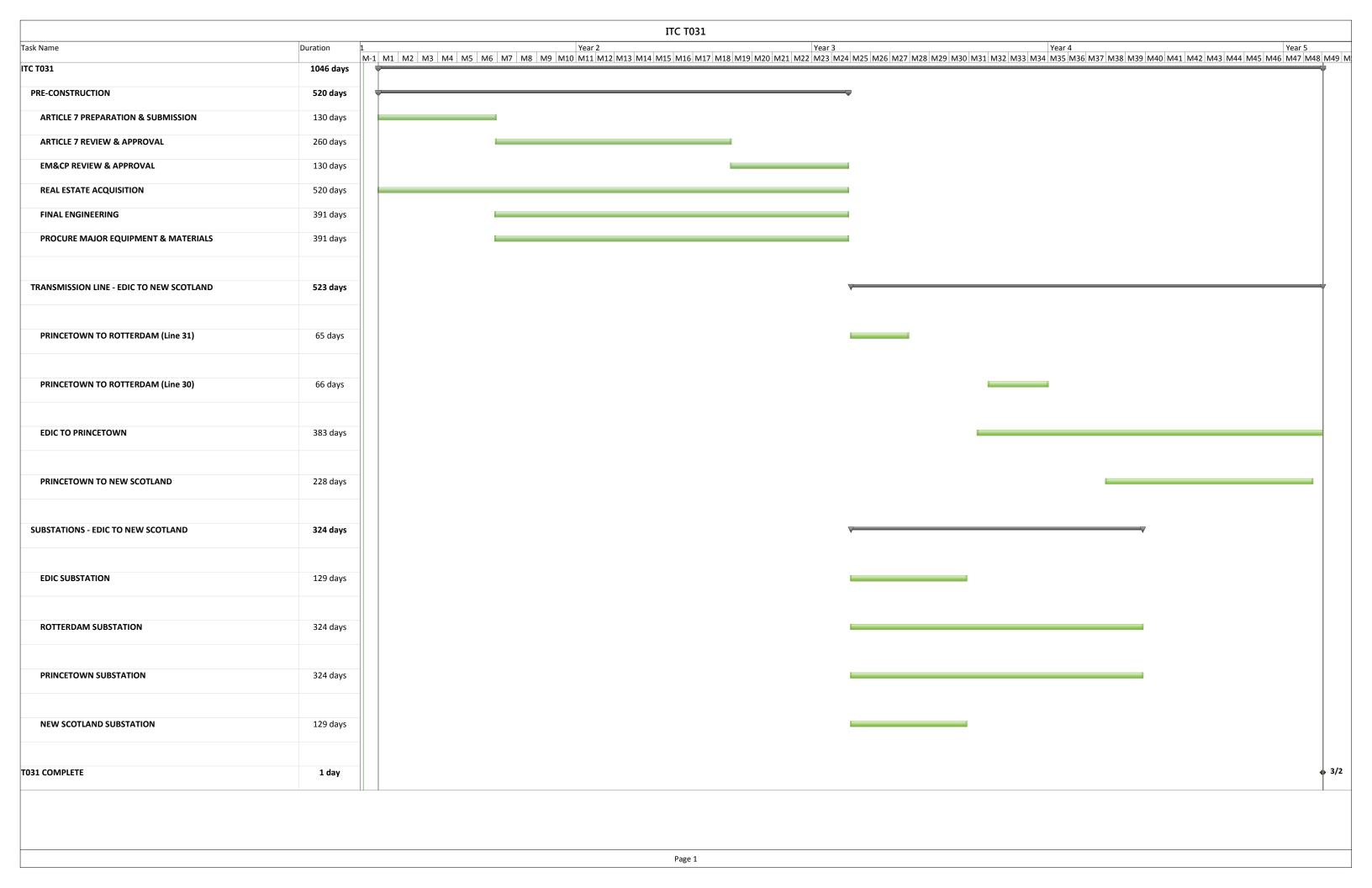
		NEXTERA T021
ask Name	Duration M-	Year 1 Year 2 Year 3 Year 4 1 M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16 M17 M18 M19 M20 M21 M22 M23 M24 M25 M26 M27 M28 M29 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M40 M41 M42 M43 M44 M45 M46 M47
EXTERA T021	1046 days	
PRE-CONSTRUCTION	520 days	V V
ARTICLE 7 PREPARATION & SUBMISSION	130 days	
ARTICLE 7 REVIEW & APPROVAL	260 days	
EM&CP REVIEW & APPROVAL	130 days	
REAL ESTATE ACQUISITION	520 days	
FINAL ENGINEERING	391 days	
PROCURE MAJOR EQUIPMENT & MATERIALS	391 days	
TRANSMISSION LINE - EDIC TO NEW SCOTLAND	523 days	
THE POST OF THE PO	323 day3	· ·
DDINCETOWN TO DOTTERDAM (1:22.24)	GE deve	
PRINCETOWN TO ROTTERDAM (Line 31)	65 days	
PRINCETOWN TO ROTTERDAM (Line 30)	66 days	
EDIC TO PRINCETOWN	383 days	
PRINCETOWN TO NEW SCOTLAND	228 days	
SUBSTATIONS - EDIC TO NEW SCOTLAND	324 days	lacksquare
EDIC SUBSTATION	129 days	
PRINCETOWN SUBSTATION	324 days	
NEW SCOTLAND SUBSTATION	129 days	

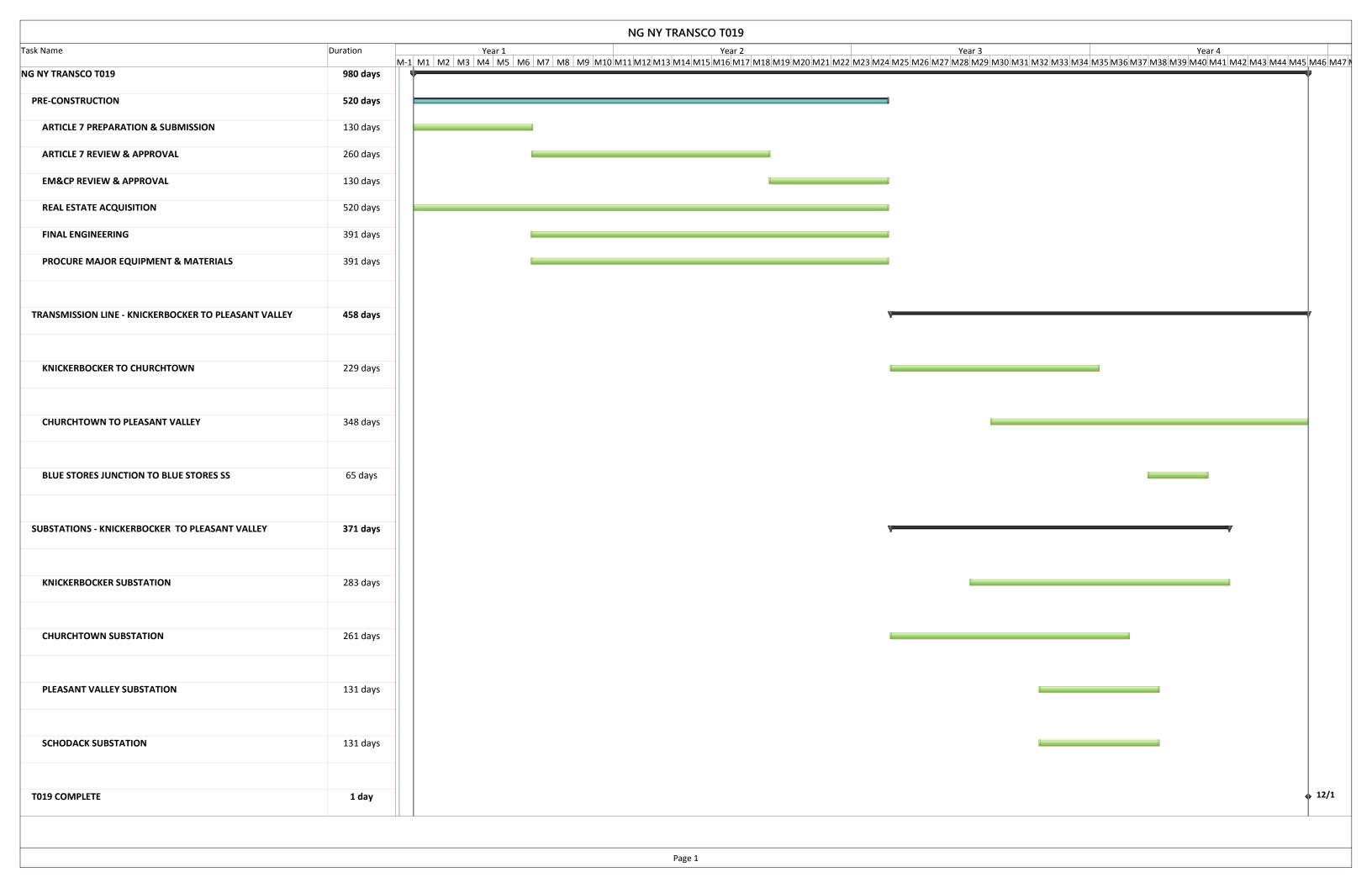
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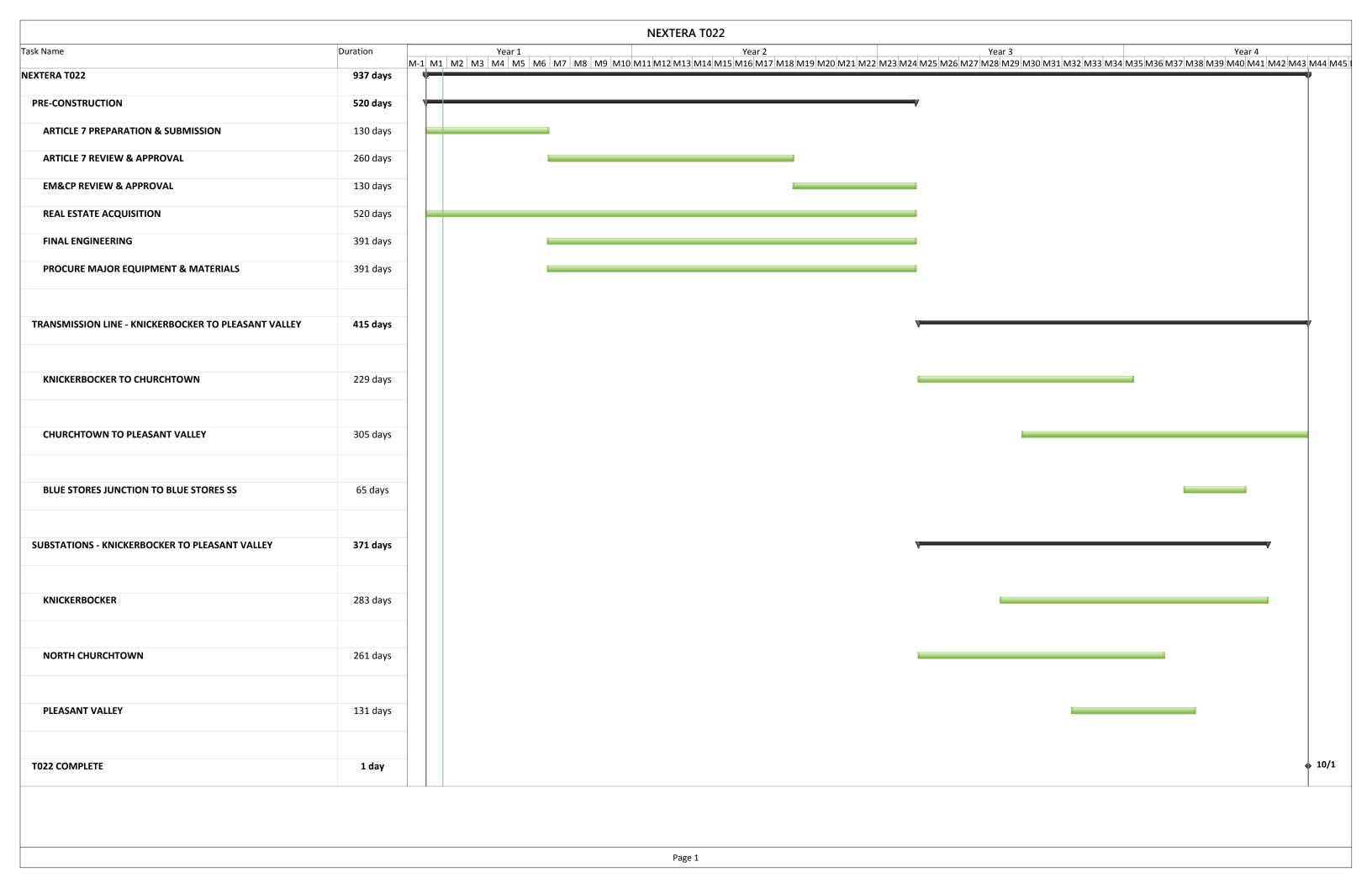


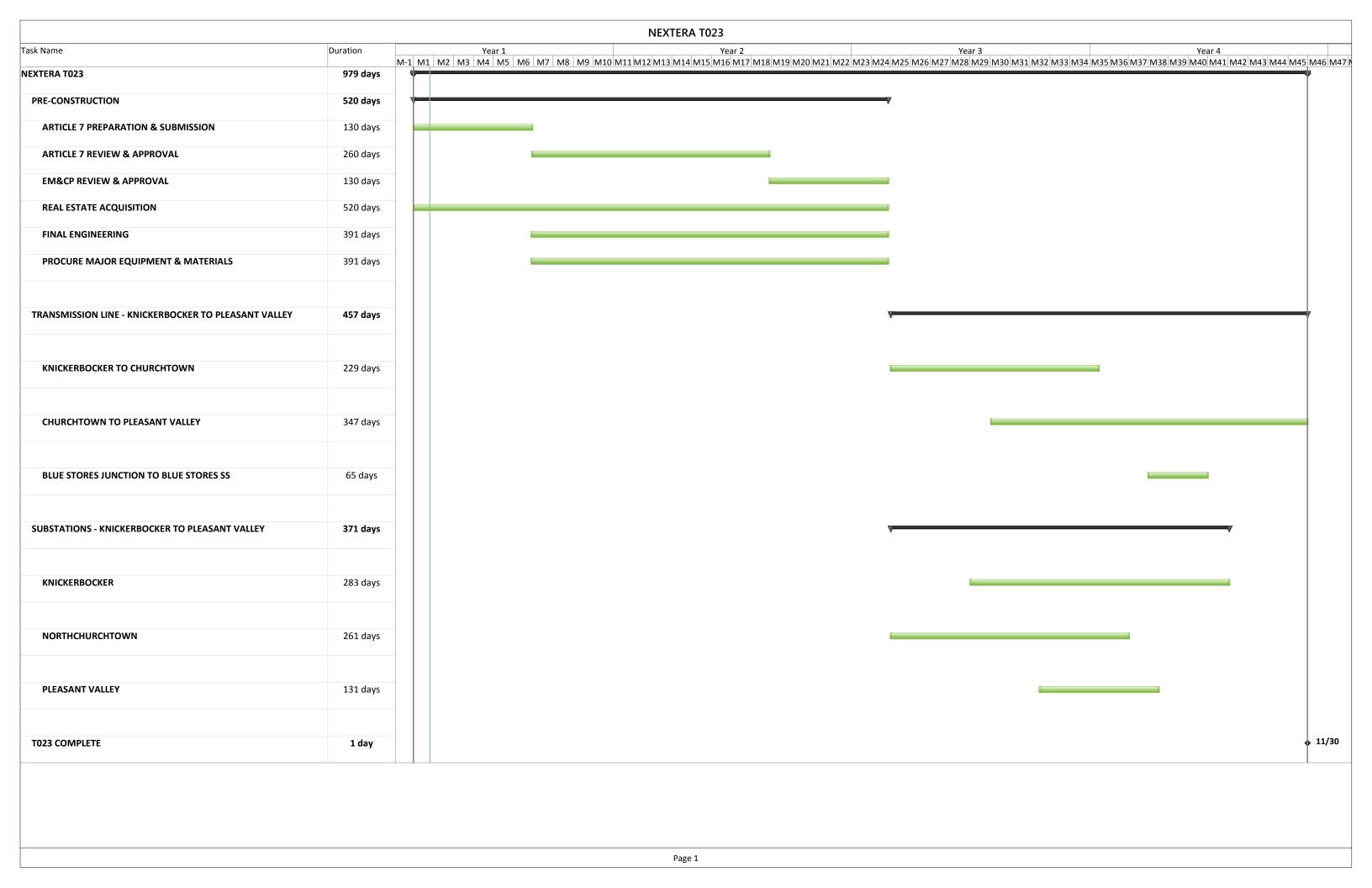












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isk Name		Year 1 Year 2 Year 3 Year 4 M-1 M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M15 M10 M10 M2 M20 M20 M20 M20 M20 M20 M30 M31 M32 M30 M31 M35 M36 M37 M38 M39 M40 M41 M42 M43 M44 M45
YPA NAT T029	980 days	
PRE-CONSTRUCTION	520 days	
ARTICLE 7 PREPARATION & SUBMISSION	130 days	
ARTICLE 7 REVIEW & APPROVAL	260 days	
EM&CP REVIEW & APPROVAL	130 days	
REAL ESTATE ACQUISITION	520 days	
FINAL ENGINEERING	391 days	
PROCURE MAJOR EQUIPMENT & MATERIALS	391 days	
TRANSMISSION LINE - KNICKERBOCKER TO PLEASANT VALLEY	458 days	
	,-	
KNICKERBOCKER TO CHURCHTOWN	229 days	
RIVICKERBOCKER TO CHORCHTOWN	223 uays	
CHURCHTOWN TO PLEASANT VALLEY	348 days	
BLUE STORES JUNCTION TO BLUE STORES SS	65 days	
SUBSTATIONS - KNICKERBOCKER TO PLEASANT VALLEY	371 days	
KNICKERBOCKER	283 days	
CHURCHTOWN	261 days	
PLEASANT VALLEY	131 days	
SCHODACK	131 days	
	, , ,	
020 COMPLETE	4 plan.	
D29 COMPLETE	1 day	

NYPA NAT T030			
sk Name		Year 1 Year 2 Year 3 Year 4 M-1 M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M10	
YPA NAT T030	980 days		
PRE-CONSTRUCTION	520 days		
ARTICLE 7 PREPARATION & SUBMISSION	130 days		
ARTICLE 7 REVIEW & APPROVAL	260 days		
EM&CP REVIEW & APPROVAL	130 days		
REAL ESTATE ACQUISITION	520 days		
FINAL ENGINEERING	391 days		
PROCURE MAJOR EQUIPMENT & MATERIALS	391 days		
TRANSMISSION LINE - KNICKERBOCKER TO PLEASANT VALLEY	458 days		
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KNICKERBOCKER TO CHURCHTOWN	229 days		
CHURCHTOWN TO PLEASANT VALLEY	348 days		
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PLEASANT VALLEY	131 days		
SCHODACK	131 days		
030 COMPLETE	1 day		

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k Name	Duration M-1	Year 1 Year 2 Year 3 Year 3 Year 4 M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16 M17 M18 M19 M20 M21 M22 M23 M24 M25 M26 M27 M28 M29 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M40 M41 M42 M43 M44 M45 M46 M44 M45 M46 M46 M47 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30 M31 M32 M33 M34 M35 M36 M37 M38 M39 M30
T032	1025 days	
PRE-CONSTRUCTION	520 days	
ARTICLE 7 PREPARATION & SUBMISSION	130 days	
ARTICLE 7 REVIEW & APPROVAL	260 days	
EM&CP REVIEW & APPROVAL	130 days	
REAL ESTATE ACQUISITION	520 days	
FINAL ENGINEERING	391 days	
PROCURE MAJOR EQUIPMENT & MATERIALS	391 days	
RANSMISSION LINE - KNICKERBOCKER TO PLEASANT VALLEY	503 days	V-
KNICKERBOCKER TO CHURCHTOWN	229 days	
CHURCHTOWN TO PLEASANT VALLEY	393 days	
BLUE STORES JUNCTION TO BLUE STORES SS	65 days	
BSTATIONS - KNICKERBOCKER TO PLEASANT VALLEY	295 days	
KNICKERBOCKER	261 days	
CHURCHTOWN	261 days	
PLEASANT VALLEY	131 days	
32 COMPLETE	1 day	



		National Grid and NY Transco (T018)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$52,139
	1.2	Foundations	\$38,037
	1.3	Structures	\$67,033
	1.4	Conductor, Shiedwire and OPGW	\$35,990
	1.5	Insulators, Fitting and Hardwares	\$10,840
		Subtotal (1)	\$204,039
	2	Substations	
st	2.1	Rotterdam Substation	\$48,141
t Co	2.2	Edic Substation	\$2,117
Direct Cost	2.3	Princetown Substation	\$0
	2.4	New Scotland Substation	\$7,037
	2.5	Porter Substation	\$546
	2.6	Knickerbocker Substation	\$0
	2.7	Marcy Substation	\$0
	2.8	Substation Interconnections	\$8,459
		Subtotal (2)	\$66,301
		Total (1+2)	\$270,340
		Contractors Mark-up (15% of Total 1+2)	\$40,551
		Total Direct Cost (A)	\$310,891
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,711
	3.2	Project Management, Material Handling & Amenities	\$18,402
Cost	3.3	Engineering	\$18,121
ect	3.4	Testing & Commissioning	\$1,559
Indirect Cost	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$20,144
	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,719
		Total Indirect Cost (3)	\$77,575
		Subtotal Project Cost (B=A+3) 2017 \$	\$388,466
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project	\$0
	4.2	NUF identified during Evaluation	\$0
		Subtotal NUF Cost (C)	\$0
		Total Project Cost (B+C) 2017 \$	\$388,466
		Total Project Cost 2018 \$	\$400,120

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Estimate Revision: 5

	NG & NY Transco - T018 - (Segment A) - Direct Costs		Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Edic to Princetown	\$	135,362,305
Direct Labor, Material & Equipment Costs	B. Transmission Line Princetown to Rotterdam	\$	25,485,641
Direct Labor, Material & Equipment Costs	C. Transmission Line Princetown to New Scotland	\$	43,191,073
Direct Labor, Material & Equipment Costs	D. Rotterdam Substation - Install	\$	44,530,412
Direct Labor, Material & Equipment Costs	E. Rotterdam Substation - Removal	\$	3,611,030
Direct Labor, Material & Equipment Costs	F. Edic Substation - Install	\$	2,081,185
Direct Labor, Material & Equipment Costs	G. Edic Substation - Removal	\$	35,950
Direct Labor, Material & Equipment Costs	H. New Scotland Substation - Install	\$	6,878,173
Direct Labor, Material & Equipment Costs	I. New Scotland Substation - Removal	\$	159,075
Direct Labor, Material & Equipment Costs	J. Porter Substation - Install	\$	71,912
Direct Labor, Material & Equipment Costs	K. Porter Substation - Removal	\$	474,313
Direct Labor, Material & Equipment Costs	L. Interconnection Edic Station	\$	1,784,075
Direct Labor, Material & Equipment Costs	M. Interconnection New Scotland Station	\$	2,594,271
Direct Labor, Material & Equipment Costs	N. Interconnection Rotterdam Station	\$	4,080,624
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	-
	SUBTOT	AL: \$	270,340,040
	CONTRACTOR MARK-UP (OH	ķΡ) \$	40,551,006
	CONTINGENCY ON ENTIRE PROJE	CT \$	-
	TOTAL DIREC	T: \$	310,891,046

	NG & NY Transco - T018 - (Segment A) - Indirect Costs		Total Each Segment
Indirect Costs	A. Transmission Line Edic to Princetown	\$	38,838,802
Indirect Costs	B. Transmission Line Princetown to Rotterdam	\$	5,423,881
Indirect Costs	C. Transmission Line Princetown to New Scotland	\$	9,939,957
Indirect Costs	D. Rotterdam Substation - Install	\$	11,232,064
Indirect Costs	E. Rotterdam Substation - Removal	\$	585,240
Indirect Costs	F. Edic Substation - Install	\$	506,194
Indirect Costs	G. Edic Substation - Removal	\$	5,790
Indirect Costs	H. New Scotland Substation - Install	\$	1,654,143
Indirect Costs	I. New Scotland Substation - Removal	\$	25,622
Indirect Costs	J. Porter Substation - Install	\$	15,157
Indirect Costs	K. Porter Substation - Removal	\$	83,512
Indirect Costs	L. Interconnection Edic Station	\$	337,998
Indirect Costs	M. Interconnection New Scotland Station	\$	506,933
Indirect Costs	N. Interconnection Rotterdam Station	\$	700,876
Indirect Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Indirect Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	-
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitagation)	\$	7,718,854
	TOTAL INDIREC	:T: \$	77,575,022

Page 2 of 57
Direct & Indirect Totals

TOTAL ESTIMATED COST: \$

388,466,068

A. Transmission Line Edic to Princetown

NG & NY Transco - T018 - (Segment A)

Estimate Revision:

4

Total: \$ 174,201,107

NG & NY Transco - T018 - (Segr	nent A)					
		Supply		Installation		Total
A. Transmission Line Edic to Princetown						
1. CLEARING & ACCESS	\$	41,500	\$	36,310,876	\$	36,352,376
2. FOUNDATIONS	\$	7,516,941	\$	13,107,490	\$	20,624,431
3. STRUCTURES	\$	18,292,102	\$	27,319,288	\$	45,611,390
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	4,946,158	\$	21,045,480	\$	25,991,638
5. INSULATORS, FITTINGS, HARDWARE	\$	4,581,500	\$	2,200,970	\$	6,782,470
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	2,830,256	\$	36,008,546	\$	38,838,802
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	38,208,458	\$	135,992,649	\$	174,201,107
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	38.208.458	Ś	135.992.649	Ś	174.201.107

Description of Work:

A. Transmission Line Edic to Prin 1. CLEARING & ACCESS 1.1 Clearing the ROW - Heavy (mowing & clearing the ROW - Light (mowing)		19									
1.1 Clearing the ROW - Heavy (mowing & c	learing)	19									
	learing)	19									
1.2 Clearing the ROW - Light (mowing)		15	Acre	\$		\$ -	\$ 15,000	\$ 285,000	\$ 15,000	\$	285,000
		172	Acre			\$ -	\$ 5,000	\$ 860,000	\$ 5,000	\$	860,000
1.3 Permanent Access Road		70,540.8	LF	\$.	\$ -	\$ 45	\$ 3,174,336	\$ 45	\$	3,174,336
1.4 Silt Fence		352,704	LF	\$.	\$ -	\$ 4	\$ 1,410,816	\$ 4	\$	1,410,816
1.5 Matting - Access and ROW		282,163.2	LF	<u>'</u>	$\overline{}$	\$ -	\$ 70				19,751,424
1.6 Matting - To Work Area		27,075	LF	\$.	\$ -	\$ 70	\$ 1,895,250			1,895,250
1.7 Snow Removal		66.8	Mile	\$.	\$ -	\$ 16,000				1,068,800
1.8 ROW Restoration		66.8	Mile	\$.	\$ -	\$ 10,000	\$ 668,000	\$ 10,000	\$	668,000
1.9 Work Pads		1,805,000	SF	'		\$ -	\$ 4	-,,		\$	6,353,600
1.10 Restoration for Work Pad areas		361,000	SF	7		\$ -	\$ 0.15	\$ 54,150		\$	54,150
1.11 Temporary Access Bridge		-	EA	т		\$ -	\$ 20,035	\$ -	\$ 20,035	\$	-
1.12 Air Bridge		-	EA	\$		\$ -	\$ 14,445	\$ -	\$ 14,445	\$	-
1.13 Stabilized Construction Entrance		50	EA	\$.	\$ -	\$ 4,580	\$ 229,000	\$ 4,580	\$	229,000
1.14 Maintenance and Protection of Traffic of	on Public Roads	100	EA	7	_	\$ -	\$ 4,130	,	\$ 4,130	_	413,000
1.15 Culverts / Misc. Access		10	EA	\$	50	\$ 7,500	\$ 1,250		\$ 2,000	\$	20,000
1.16 Gates		17	EA	\$ 2,0	000	\$ 34,000	\$ 2,500		\$ 4,500	\$	76,500
1.17 Concrete Washout Station		50	EA	\$		\$ -	\$ 1,850	\$ 92,500	\$ 1,850	\$	92,500
TOTAL - CLEARING & ACCESS:						\$ 41,500		\$ 36,310,876		\$	36,352,376
2. FOUNDATIONS											
2.1 Direct Embed - 345kV Single Circuit H-F	Pole Tangent (0-2 degree) 65'-115'	268	Structure	\$ 3,	094	\$ 829,125	\$ 21,038	\$ 5,638,050	\$ 24,131	\$	6,467,175
2.2 Drilled Pier - 345kV Single Circuit H-Pol	e Angle (15-30 degree)	9	Structure	\$ 94,	324	\$ 853,418	\$ 95,840	\$ 862,557	\$ 190,664	\$	1,715,975
2.3 Drilled Pier - 345kV Single Circuit H-Pol	e Angle (2-15 degree)	33	Structure	\$ 94,	324	\$ 3,129,198	\$ 95,840	\$ 3,162,710	\$ 190,664	\$	6,291,908
2.4 Drilled Pier - 345kV Single Circuit H-Pol	e Angle (30-60 degree)	6	Structure	\$ 94,	324	\$ 568,945	\$ 95,840	\$ 575,038	\$ 190,664	\$	1,143,983
2.5 Drilled Pier - 345kV Single Circuit Single		3	Structure	\$ 79,	376	\$ 238,129	\$ 80,226	\$ 240,679	\$ 159,603	\$	478,808
2.6 Drilled Pier - 345kV Single Circuit Single		8	Structure	\$ 100,	112	\$ 803,294		· · · · · · · · · · · · · · · · · · ·	\$ 201,899	_	1,615,191
2.7 Drilled Pier - 345kV Single Circuit Single		2	Structure	\$ 100,	112	\$ 200,823	\$ 101,487	\$ 202,974	\$ 201,899	\$	403,798
2.8 Drilled Pier - 345kV Single Circuit Single		32	Structure	\$ 27.	938	\$ 894,010			\$ 56,175	Ś	1,797,594
2.9	The langent (o 2 degree)	52	Structure			Ç 05 1,010	Ç 20)207	ŷ 303,30°.	\$ 30,273	•	
2.10 Rock Excavation Adder		355	СҮ	\$		\$ -	\$ 2,000	\$ 710,000	\$ 2,000	\$	710,000
TOTAL - FOUNDATIONS:						\$ 7,516,941		\$ 13,107,490		\$	20,624,431
3. STRUCTURES											
3.1 345kV Single Circuit H-Pole Angle (15-30	0 degree) 60'-90'	9	Structure	\$ 97,0	13	\$ 878,521	\$ 58,568	\$ 527,112	\$ 156,181	\$	1,405,633
3.2 345kV Single Circuit H-Pole Angle (2-15		33	Structure	\$ 97,0	-	\$ 3,221,242		\$ 1,932,745		\$	5,153,988
3.3 345kV Single Circuit H-Pole Angle (30-60	_ ·	6	Structure	\$ 98,8	-	\$ 593,036		\$ 355,822		_	948,858

Item	Item Description	Estimated Quantity	Unit of Measure	Material	Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
3.4	345kV Single Circuit H-Pole Tangent (0-2 degree) 65'-115'	268	Structure	\$	39,502	\$ 10,586,586	\$ 23,701	\$ 6,351,952	\$ 63,203	\$	16,938,538
3.5	345kV Single Circuit Single Pole Angle (2-15 degree) 95'-110'	3	Structure	\$	82,952	\$ 248,856	\$ 49,771	\$ 149,314	\$ 132,723	\$	398,170
3.6	345kV Single Circuit Single Pole Deadend (15-30 degree) 115'-155'	8	Structure	\$	101,691	\$ 813,526	\$ 61,014	\$ 488,116	\$ 162,705	\$	1,301,642
3.7	345kV Single Circuit Single Pole Deadend (30-60 degree) 140'-145'	2	Structure	\$	106,098	\$ 212,195	\$ 63,659	\$ 127,317	\$ 169,756	\$	339,512
3.8	345kV Single Circuit Single Pole Tangent (0-2 degree) 100'-130'	32	Structure	\$	43,612	\$ 1,395,577	\$ 26,167	\$ 837,346	\$ 69,779	\$	2,232,923
3.9							·				
3.10	Remove Existing Foundation	50	EA	\$	-	\$ -	\$ 7,500	\$ 375,000	\$ 7,500	\$	375,000
3.11	Remove Existing Structure and Accessories	994	EA	\$	-	\$ -	\$ 12,500	\$ 12,425,000	\$ 12,500	\$	12,425,000
3.12											
3.13											
3.14	Install Grounding and Grounding Accessories	677	Pole	\$	506	\$ 342,562	\$ 5,539	\$ 3,749,565	\$ 6,045	\$	4,092,127
3.15											
TOTAL - STRUC						\$ 18,292,102		\$ 27,319,288		\$	45,611,390
	R, SHIELDWIRE, OPGW					•					
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	2,228,688	LF	\$	1.90	\$ 4,234,507	\$ 5.00	\$ 11,143,440	\$ 6.90	\$	15,377,947
4.2	(1) OPGW 36 Fiber AC-33/38/571	301,594	LF	\$	1.35	\$ 407,152	\$ 5.00	\$ 1,507,970	\$ 6.35	\$	1,915,122
4.3	(1) 3/8" EHS7 Steel	301,594	LF	\$	0.47	\$ 141,749	\$ 5.00	\$ 1,507,970	\$ 5.47	\$	1,649,719
4.4	Remove Existing Conductor and Accessories	121.0	Mile	\$	-	\$ -	\$ 30,000	\$ 3,630,000	\$ 30,000.00	\$	3,630,000
4.5	Remove Existing OPGW and Accessories	108.4	Mile	\$	-	\$ -	\$ 12,000	\$ 1,300,800	\$ 12,000.00	\$	1,300,800
4.6	Remove Existing OHSW and Accessories	108.4	Mile	\$	-	\$ -	\$ 12,000	\$ 1,300,800	\$ 12,000.00	\$	1,300,800
4.7	Rider Poles (187 Locations)	93	Set	\$	1,750	\$ 162,750	\$ 3,500	\$ 325,500	\$ 5,250.00	\$	488,250
4.8	Rider Poles - Relocated	94	Set	\$	-	\$ -	\$ 3,500	\$ 329,000	\$ 3,500.00	\$	329,000
	UCTOR, SHIELDWIRE, OPGW:					\$ 4,946,158		\$ 21,045,480		\$	25,991,638
5. INSULATOR	FITTINGS, HARDWARE					· · · · ·		, ,			
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,113	Assembly	\$	1,800	\$ 2,003,400	\$ 720	\$ 801,360	\$ 2,520	\$	2,804,760
	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900	\$ -	\$ 560	\$ -	\$ 1,460	\$	-
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	375	Assembly	\$	1,800	\$ 675,000	\$ 720	\$ 270,000	\$ 2,520	\$	945,000
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)		Assembly	Ś	900	\$ -	\$ 560	\$ -	\$ 1,460	\$	-
5.5	OPGW Assembly - Tangent	336	Assembly	Ś	200	\$ 67,200	\$ 150		\$ 350	\$	117,600
5.6	OPGW Assembly - Angle / DE	50	Assembly	Ś	250	\$ 12,500	\$ 150	\$ 7,500	\$ 400	\$	20,000
5.7	OHSW Assembly - Tangent	301	Assembly	\$	200	\$ 60,200	\$ 150	, , , , , , , , , , , , , , , , , , , ,	\$ 350	\$	105,350
5.8	OHSW Assembly - Angle / DE	20	Assembly	Ś		\$ 5,000	\$ 150				8,000
5.9	OPGW Splice Boxes	41	Set	\$		\$ 71,592		\$ 93,234	\$ 4,020	\$	164,826
5.10	OPGW Splice & Test	41	EA	Ś	2,520	\$ 103,320	\$ 2,520	\$ 103,320	\$ 5,040	4	206,640
5.11	Spacer - Conductor	3,593	EA	\$	50	\$ 179,650	\$ 35		\$ 85	\$	305,405
5.12	Vibration Dampers - Conductor	2,874	EA	\$	35	\$ 100,590			\$ 70		201,180
5.13	Shield wire / OPGW Dampers, Misc. Fittings	1,356	EA	\$	27	\$ 36,612	\$ 35		\$ 62		84,072
5.14	Sincia wite / Or GW Bumpers, Misc. Fittings	1,550	EA	1	2,	ÿ 30,012	33	7 47,400	ÿ 02	7	- 04,072
5.15	Replace - Mono Pole Vertical Tangent - V-String	480	Set	\$	1,800	\$ 864,000	\$ 720	\$ 345,600	\$ 2,520	\$	1,209,600
5.16	Replace - Dead-end & Angle Insulators	195	Set	Ś	1,800	\$ 351,000	\$ 720		\$ 2,520	\$	491,400
5.17	, ,			<u> </u>	,		,		, , , , , , , , , , , , , , , , , , , ,		
5.18	Guys, Anchors, and Accessories		EA	Ś	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	_
5.19	Misc. materials (Signs and Markers)	66.8	Mile	Ś	770	\$ 51,436	\$ 1,006	\$ 67,201	\$ 1,776	\$	118,637
	ATORS, FITTINGS, HARDWARE:					\$ 4,581,500	,	\$ 2,200,970	,	\$	6,782,470
A. Trans	mission Line Edic to Princetown					\$ 35,378,202		\$ 99,984,104		\$	135,362,305
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 1,353,623	\$ 1,353,623	\$ 1,353,623	\$	1,353,623
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 6,506,866	\$ 6,506,866	\$ 6,506,866	\$	6,506,866
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 1,353,623	\$ 1,353,623	\$ 1,353,623	¢	1,353,623
U.3	Othicy rivi and croject Oversite	1	LO	1		· -	1,333,023 ب	1,303,023 ب	1,303,023 پ	۶	1,353,623

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 1,353,623	\$ 1,353,623	\$ 1,353,623	\$ 1,353,623
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 6,768,115	\$ 6,768,115	\$ 6,768,115	\$ 6,768,115
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 406,087	\$ 406,087	\$ 406,087	\$ 406,087
6.7	Geotech	67	Location	\$	-	\$ -	\$ 3,500	\$ 234,500	\$ 3,500	\$ 234,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 947,536	\$ 947,536	\$ 947,536	\$ 947,536
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 406,087	\$ 406,087	\$ 406,087	\$ 406,087
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ 7,584,000	\$ 7,584,000	\$ 7,584,000	\$ 7,584,000
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$
6.17	Compensation for use of 1 Ckt - NYPA Structures (92 Structures)	1	LS	\$	-	\$ -	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123
6.18	Sales Tax on Materials	1	LS	\$	2,830,256	\$ 2,830,256	\$ -	\$ -	\$ 2,830,256	\$ 2,830,256
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 135,362	\$ 135,362	\$ 135,362	\$ 135,362
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 2,830,256		\$ 36,008,546		\$ 38,838,802

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A. TL Edic-Princetown

B. Transmission Line Princetown to Rotterdam

Estimate Revision: Total: \$ 30,909,522

NG & NY Transco - T018	- (Segm	ent A)		
		Supply	Installation	Total
B. Transmission Line Princetown to Rotterdam				
1. CLEARING & ACCESS	\$	6,000	\$ 4,142,200	\$ 4,148,200
2. FOUNDATIONS	\$	3,178,993	\$ 4,231,038	\$ 7,410,031
3. STRUCTURES	\$	4,080,173	\$ 4,419,070	\$ 8,499,243
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	773,826	\$ 2,903,455	\$ 3,677,281
5. INSULATORS, FITTINGS, HARDWARE	\$	1,143,953	\$ 606,933	\$ 1,750,886
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	734,636	\$ 4,689,245	\$ 5,423,881
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	9,917,580	\$ 20,991,942	\$ 30,909,522
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	9,917,580	\$ 20,991,942	\$ 30,909,522

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Item	ltem Description	Estimated Quantity	Unit of Measure	Ma	iterial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
B. Trans	mission Line Princetown to Rotterdam										
1. CLEARING	& ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	24.0	Acre	\$	-	\$ -	\$ 5,000	\$ 120,000	\$ 5,000	\$	120,000
1.3	Permanent Access Road	5,280	LF	\$	-	\$ -	\$ 45	, ,	\$ 45	\$	237,600
1.4	Silt Fence	26,400	LF	\$	-	\$ -	\$ 4		\$ 4	\$	105,600
1.5	Matting - Access and ROW	21,120	LF	\$		\$ -	\$ 70		\$ 70		1,478,400
1.6	Matting - To Work Area	6,375	LF.	\$		\$ -	\$ 70				446,250
1.7	Snow Removal	5.0	Mile	\$		\$ -	\$ 16,000	, ,	\$ 16,000		80,000
1.8	ROW Restoration Work Pads	5.0 425,000	Mile SF	\$	-	\$ - \$ -	\$ 10,000 \$ 4	\$ 50,000 \$ 1,496,000	\$ 10,000 \$ 4	\$	50,000
1.10	Restoration for Work Pad areas	425,000 85,000	SF SF	Ś		\$ -	\$ 0.2			\$	1,496,000 12,750
1.10	Temporary Access Bridge	85,000	EA	Ś		\$ -		\$ 12,750	\$ 20,035	Ś	12,750
1.12	Air Bridge	_	EA	\$	-	\$ -		\$ -	\$ 14,445	Ġ	
1.13	Stabilized Construction Entrance	10	EA	Ś	-	\$ -	\$ 4,580		\$ 4,580	Ś	45,800
1.14	Maintenance and Protection of Traffic on Public Roads	10	LS	Ś		\$ -	\$ 4,130	·	\$ 4,130	Ś	41,300
1.15	Gates	-	EA	\$	2,000	·	\$ 2,500		\$ 4,500		-
1.16	Culverts / Misc. Access	8	EA	\$	750	\$ 6,000	\$ 1,250	\$ 10,000	\$ 2,000	\$	16,000
1.17	Concrete Washout Station	10	EA	\$	-	\$ -	\$ 1,850	\$ 18,500	\$ 1,850	\$	18,500
TOTAL - CLEA	RING & ACCESS:					\$ 6,000		\$ 4,142,200		\$	4,148,200
2. FOUNDATI	DNS										
2.1	Drilled Pier - 345kV Single Circuit Single Pole Angle	4	Structure	\$	28,102	\$ 112,409	\$ 28,403	\$ 113,612	\$ 56,505	\$	226,021
2.2	Drilled Pier - 345kV Single Circuit Single Pole Deadend	2	Structure	\$	79,376	\$ 158,752	\$ 80,226	\$ 160,453	\$ 159,603	\$	319,205
2.3	Drilled Pier - 345kV Single Circuit Single Pole Hvy Angle/DE	22	Structure	\$	79,376	\$ 1,746,277	\$ 80,226	\$ 1,764,979	\$ 159,603	\$	3,511,255
2.4	Drilled Pier - 345kV Single Circuit Single Pole Tangent Delta	57	Structure	\$	20,378	\$ 1,161,555	\$ 20,596	\$ 1,173,995	\$ 40,975	\$	2,335,550
2.5											
2.6											
2.7											
2.8	Rock Excavation Adder	509.0	CY	\$	-	\$ -	\$ 2,000	\$ 1,018,000	\$ 2,000	\$	1,018,000
TOTAL - FOUR	DATIONS:					\$ 3,178,993		\$ 4,231,038		\$	7,410,031
3. STRUCTUR	ES										
3.1	345kV Single Circuit Single Pole Angle 95'	4	Structure	\$	40,408	\$ 161,631	\$ 24,245	\$ 96,978	\$ 64,652	\$	258,609
3.2	345kV Single Circuit Single Pole Deadend 95'	2	Structure	\$	110,393	\$ 220,786	\$ 66,236	\$ 132,472	\$ 176,629	\$	353,258
3.3	345kV Single Circuit Single Pole Hvy Angle/DE 90'-95'	22	Structure	\$	83,034	\$ 1,826,747	\$ 49,820	\$ 1,096,048	\$ 132,854	\$	2,922,796
3.4	345kV Single Circuit Single Pole Tangent Delta 90'-95'	57	Structure	\$	32,070	\$ 1,827,998	\$ 19,242	\$ 1,096,799	\$ 51,312	\$	2,924,797
3.5	Remove Existing Foundation	22	EA	\$	-	\$ -	\$ 7,500	\$ 163,500	\$ 7,500	\$	163,500

Item	ltem Description	Estimated Quantity	Unit of Measure	Mat	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
3.6	Remove Existing Structure and Accessories	109	EA	\$	-	\$ -	\$ 12,500	\$ 1,362,500	\$ 12,500	\$	1,362,500
3.7											
3.8	Install Grounding and Grounding Accessories	85	Pole	\$	506	\$ 43,010	\$ 5,539	\$ 470,773	\$ 6,045	\$	513,783
3.9											
3.10											
	CTURES PRINCTOWN TO NEW SCOTLAND:					\$ 4,080,173		\$ 4,419,070		\$	8,499,243
	R, SHIELDWIRE, OPGW	220.202	15	Ś	4.00	¢ 644.657	ć 5.00	ć 1.606.46E	\$ 6.90	\$	2,341,122
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	339,293	LF	1	1.90	\$ 644,657	\$ 5.00	\$ 1,696,465	\$ 6.90		
4.2	(1) OPGW 36 Fiber AC-33/38/571	56,549	LF	\$	1.35	\$ 76,341	\$ 5.00	\$ 282,745	\$ 6.35	\$	359,086
4.3	(1) 3/8" EHS7 Steel	56,549	LF	\$	0.47	\$ 26,578	\$ 5.00	\$ 282,745	\$ 5.47	\$	309,323
4.5	Remove Existing Conductor and Accessories	10.0	Mile	\$	-	\$ -	\$ 30,000	\$ 300,000	\$ 30,000.00	\$	300,000
4.6	Remove Existing OPGW and Accessories	10.0	Mile	\$	-	\$ -	\$ 12,000	\$ 120,000	\$ 12,000.00	\$	120,000
4.7	Remove Existing OHSW and Accessories	10.0	Mile	\$	-	\$ -	\$ 12,000	\$ 120,000	\$ 12,000.00	\$	120,000
4.8	Rider Poles	15	Set	\$	1,750	\$ 26,250	\$ 3,500	\$ 52,500	\$ 5,250.00	\$	78,750
4.9	Rider Poles - Relocated	14	Set	\$	-	\$ -	\$ 3,500	\$ 49,000	\$ 3,500.00	\$	49,000
4.10											
4.11											
	UCTOR, SHIELDWIRE, OPGW:					\$ 773,826		\$ 2,903,455		\$	3,677,281
	, FITTINGS, HARDWARE										
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	366	Assembly	\$	1,800	\$ 658,800			\$ 2,520	_	922,320
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900	\$ -	\$ 560		\$ 1,460	\$	-
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly	\$	1,800	\$ -	\$ 720		\$ 2,520	\$	-
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	360	Assembly	\$	900	\$ 324,000	\$ 560		\$ 1,460	\$	525,600
5.5	OPGW Assembly - Tangent	61	Assembly	\$	200	\$ 12,200			\$ 350	\$	21,350
5.6	OPGW Assembly - Angle / DE	24	Assembly	\$	250	\$ 6,000	\$ 150	·	\$ 400	\$	9,600
5.7	OHSW Assembly - Tangent	61	Assembly	\$	200	\$ 12,200			\$ 350	\$	21,350
5.8	OHSW Assembly - Angle / DE	24	Assembly	\$	250	\$ 6,000	\$ 150		\$ 400	\$	9,600
5.9	OPGW Splice Boxes	8	Set	\$	1,746	\$ 13,969	. ,	\$ 18,192	\$ 4,020	\$	32,161
5.10	OPGW Splice & Test	8	EA	\$	2,520	\$ 20,160	\$ 2,520		\$ 5,040	\$	40,320
5.11	Spacer - Conductor	1,038	EA	\$	50	\$ 51,900	\$ 35		\$ 85	\$	88,230
5.12	Vibration Dampers - Conductor	830	EA	\$	35		\$ 35		\$ 70	\$	58,100
5.13	Shieldwire / OPGW Dampers, Misc. Fittings	210	EA	\$		\$ 5,670	\$ 35		\$ 62	\$	13,020
5.14	Guys, Anchors, and Accessories	-	EA	\$	720		\$ 885		\$ 1,605	_	
5.15	Misc. materials (Signs and Markers) ATORS, FITTINGS, HARDWARE:	5.2	Mile	\$	770	\$ 4,004 \$ 1,143,953	\$ 1,006	\$ 5,231 \$ 606,933	\$ 1,776	\$	9,235 1,750,886
										,	
	mission Line Princetown to Rotterdam					\$ 9,182,945		\$ 16,302,697		\$	25,485,641
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
6.1	Contractor Mobilization / Demobilization Mob / Demob	1	LS	Ś	_	\$ -	\$ 254,856	\$ 254,856	\$ 254,856	Ś	254,856
0.1	Project Management, Material Handling & Amenities	1	L3	1		· -	3 234,630	\$ 254,650	\$ 234,630	,	254,850
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 1,225,095	\$ 1,225,095	\$ 1,225,095	\$	1,225,095
6.3	Utility PM and Project Oversite	1	LS	\vdash		\$ -	\$ 254,856	\$ 254,856	\$ 254,856	\$	254,856
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 254,856		\$ 254,856	\$	254,856
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 1,274,282		\$ 1,274,282	\$	1,274,282
6.6	LIDAR	1	LS	\$	-	\$ -	\$ 76,457	\$ 76,457	\$ 76,457	\$	76,457
6.7	Geotech	5	Location	\$	-	\$ -	\$ 3,500	\$ 17,500	\$ 3,500	\$	17,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 178,399	\$ 178,399	\$ 178,399	\$	178,399
	Testing & Commissioning			1							
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs			1.						L.	
6.10	Environmental Licensing & Permitting Costs	-	LS	\$		\$ -			\$ -	\$	-
6.11	Environmental Mitigation Warranties / LOC's	- 1	LS LS	\$					\$ - \$ 76,457	\$	- 76,457
0.12	vvarranues / LOC S	1	LS	1 >	-	\$ -	/6,45/	/6,45/	/٥,45/	, >	/6,45/

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Ra	te	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ 1,011,000	\$ 1,011,000	\$ 1,011,000	\$ 1,011,000
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 734,63	36 \$	734,636	\$ -	\$ -	\$ 734,636	\$ 734,636
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 25,486	\$ 25,486	\$ 25,486	\$ 25,486
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	734,636		\$ 4,689,245		\$ 5,423,881

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C. Transmission Line Princetown to New Scotland

Estimate Revision:

5

Total: \$ 53,131,031

NG & NY Transco - T018 - (Segmen	nt A)			
		Supply	Installation	Total
C. Transmission Line Princetown to New Scotland				
1. CLEARING & ACCESS	\$	31,000	\$ 11,607,774	\$ 11,638,774
2. FOUNDATIONS	\$	4,202,127	\$ 5,800,125	\$ 10,002,252
3. STRUCTURES	\$	7,218,941	\$ 5,703,110	\$ 12,922,050
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	1,564,842	\$ 4,756,290	\$ 6,321,132
5. INSULATORS, FITTINGS, HARDWARE	\$	1,555,610	\$ 751,255	\$ 2,306,865
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,165,802	\$ 8,774,156	\$ 9,939,957
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	\$ -
SUBTOTAL:	\$	15,738,322	\$ 37,392,709	\$ 53,131,031
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	15,738,322	\$ 37,392,709	53,131,031

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Transı	mission Line Princetown to New Scotland								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	54.0	Acre	\$ -	\$ -	\$ 5,000	,	\$ 5,000	,
1.3	Permanent Access Road	20,803	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	104,016.0	LF	\$ -	\$ -	\$ 4			,
1.5	Matting - Access and ROW	83,213	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	9,675.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	20	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	19.7	Mile	\$ -	\$ -	\$ 10,000	\$ 197,000	\$ 10,000	\$ 197,000
1.9	Work Pads	645,000.0	SF	\$ -	\$ -	\$ 4			\$ 2,270,400
1.10	Restoration for Work Pad areas	129,000.0	SF	\$ -	\$ -	\$ 0.2			\$ 19,350
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	2.0	EA	\$ -	\$ -	\$ 14,445	\$ 28,890	\$ 14,445	\$ 28,890
1.13	Stabilized Construction Entrance	76.0	EA	\$ -	\$ -	\$ 4,580	\$ 348,080	\$ 4,580	\$ 348,080
1.14	Maintenance and Protection of Traffic on Public Roads	50	EA	\$ -	\$ -	\$ 4,130	\$ 206,500	\$ 4,130	\$ 206,500
1.15	Gates	11	EA	\$ 2,000	\$ 22,000	\$ 2,500	\$ 27,500	\$ 4,500	\$ 49,500
1.16	Culverts / Misc. Access	12	EA	\$ 750	\$ 9,000	\$ 1,250	\$ 15,000	\$ 2,000	\$ 24,000
1.17	Concrete Washout Station	30	EA	\$ -	\$ -	\$ 1,850	\$ 55,500	\$ 1,850	\$ 55,500
TOTAL - CLEAR	ING & ACCESS:				\$ 31,000		\$ 11,607,774		\$ 11,638,774
2. FOUNDATIO	ONS CONTRACTOR OF THE PROPERTY								
2.1	Direct Embed - 345kV Single Circuit H-Pole Tangent (0-2 degree) 65'-115'	56	Structure	\$ 3,094	\$ 173,250	\$ 21,038	\$ 1,178,100	\$ 24,131	\$ 1,351,350
2.2	Drilled Pier - 345kV Double Circuit Single Pole Deadend (0-30 degree)	2	Structure	\$ 124,323	\$ 248,646	\$ 125,655	\$ 251,309	\$ 249,978	\$ 499,956
2.3	Drilled Pier - 345kV Double Circuit Single Pole Tangent (0-2 degree)	15	Structure	\$ 27,856	\$ 417,834	\$ 28,154	\$ 422,309	\$ 56,010	\$ 840,144
2.4	Drilled Pier - 345kV Single Circuit H-Pole Angle (15-30 degree)	3	Structure	\$ 94,824	\$ 284,473	\$ 95,840	\$ 287,519	\$ 190,664	\$ 571,992
2.5	Drilled Pier - 345kV Single Circuit H-Pole Angle (2-15 degree)	6	Structure	\$ 94,824	\$ 568,945	\$ 95,840	\$ 575,038	\$ 190,664	\$ 1,143,983
2.6	Drilled Pier - 345kV Single Circuit H-Pole Angle (30-60 degree)	5	Structure	\$ 94,824	\$ 474,121	\$ 95,840	\$ 479,199	\$ 190,664	\$ 953,319
2.7	Drilled Pier - 345kV Single Circuit Single Pole Angle (2-15 degree)	2	Structure	\$ 79,376	\$ 158,752	\$ 80,226	\$ 160,453	\$ 159,603	\$ 319,205
2.8	Drilled Pier - 345kV Single Circuit Single Pole Deadend (15-30 degree)	6	Structure	\$ 100,412	\$ 602,470	\$ 101,487	\$ 608,923	\$ 201,899	\$ 1,211,393
2.9	Drilled Pier - 345kV Single Circuit Single Pole Deadend (30-60 degree)	2	Structure	\$ 100,412	\$ 200,823	\$ 101,487	\$ 202,974	\$ 201,899	\$ 403,798
2.10	Drilled Pier - 345kV Single Circuit Single Pole Tangent 0 (0-2 degree)	32	Structure	\$ 33,525	\$ 1,072,812	\$ 33,884	\$ 1,084,301	\$ 67,410	\$ 2,157,112
2.11									\$ -
2.12	Rock Excavation Adder	275.0	СУ	\$ -	\$ -	\$ 2,000	\$ 550,000	\$ 2,000	\$ 550,000
2.13									
2.14									
2.15									
TOTAL - FOUN	DATIONS:				\$ 4,202,127		\$ 5,800,125		\$ 10,002,252
					,		, , ,		

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3. STRUCTUR	ES								
3.1	345kV Double Circuit Single Pole Deadend (0-30 degree) 125'-140'	2	Structure	\$ 134,867	\$ 269,734	\$ 80,920	\$ 161,840	\$ 215,787	
3.2	345kV Double Circuit Single Pole Tangent (0-2 degree) 110'-140'	15	Structure	\$ 48,606		\$ 29,164			\$ 1,166,542
3.3	345kV Single Circuit H-Pole Angle (15-30 degree) 70'-90'	3	Structure	\$ 97,613		,	\$ 175,704		\$ 468,544
3.4	345kV Single Circuit H-Pole Angle (2-15 degree) 60'-75'	6	Structure	\$ 97,613			\$ 351,408		\$ 937,089
3.5 3.6	345kV Single Circuit H-Pole Angle (30-60 degree) 60'-75'	5 56	Structure	\$ 99,085 \$ 39,385		\$ 59,451 \$ 23,631	\$ 297,254 \$ 1,323,352		
3.7	345kV Single Circuit H-Pole Tangent (0-2 degree) 70'-115' 345kV Single Circuit Single Pole Angle (2-15 degree) 95'	2	Structure Structure	\$ 82,952		\$ 49,771			
3.8	345kV Single Circuit Single Pole Deadend (15-30 degree) 115'-150'	6	Structure	\$ 101,691			\$ 366,087		
3.9	345kV Single Circuit Single Pole Deadend (30-60 degree) 135'-155'	2	Structure	\$ 106,098	\$ 212,195	\$ 63,659	\$ 127,317		\$ 339,512
3.10	345kV Single Circuit Single Pole Tangent 0 (0-2 degree) 110'-145'	32	Structure	\$ 48,489	\$ 1,551,651		\$ 930,990	\$ 77,583	
3.11	Remove Existing Foundation	4	EA	\$ -	\$ -	\$ 7,500	\$ 30,000	\$ 7,500	\$ 30,000
3.12	Remove Existing Structure and Accessories	24	EA	\$ -	\$ -	\$ 12,500	\$ 300,000	\$ 12,500	\$ 300,000
3.13									
3.14	Install Grounding and Grounding Accessories	199	Pole	\$ 506	\$ 100,694	\$ 5,539	\$ 1,102,162	\$ 6,045	\$ 1,202,856
3.15									
TOTAL - STRU					\$ 7,218,941		\$ 5,703,110		\$ 12,922,050
	OR, SHIELDWIRE, OPGW	654.054		4 400	4 257 742	A 5.00	4 2202770	4 600	4
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571	661,954 110,326	LF LF	\$ 1.90 \$ 1.35		\$ 5.00 \$ 5.00	\$ 3,309,770 \$ 551,630		\$ 4,567,483 \$ 700,570
									·
4.3	(1) 3/8" EHS7 Steel 115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	75,398 41,580	LF LF	\$ 0.47 \$ 1.90					\$ 412,427 \$ 286,902
4.5	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35		\$ 5.00		\$ 6.35	\$ -
4.6	(1) 3/8" EHS7 Steel	-	LF	\$ 0.47	\$ -	\$ 5.00	\$ -	\$ 5.47	\$ -
4.7	Remove Existing Conductor and Accessories	2.5	Mile	\$ -	\$ -	\$ 30,000	\$ 75,000	\$ 30,000.00	\$ 75,000
4.8	Remove Existing OPGW and Accessories	2.5	Mile	\$ -	\$ -	\$ 12,000	\$ 30,000		\$ 30,000
4.9	Remove Existing OHSW and Accessories	2.5	Mile	\$ -	\$ -	\$ 12,000	\$ 30,000		\$ 30,000
4.10	Rider Poles	25	EA	\$ 1,750		\$ 3,500		\$ 5,250.00	\$ 131,250
4.11	Rider Poles - Relocated	25	Set	\$ -	\$ -	\$ 3,500		\$ 3,500.00	\$ 87,500
4.12				7	7	, ,,,,,,	,,,,,	, ,,,,,,,,,	,,
4.13									
	DUCTOR, SHIELDWIRE, OPGW:				\$ 1,564,842		\$ 4,756,290		\$ 6,321,132
	7. FITTINGS, HARDWARE	425	Assambly	ć 1.900	ć 702.000	ć 720	ć 212.200	ć 2.530	ć 1,000,200
5.1 5.2	345kV Tangent (1-Group of 18-Bells Each Assembly) 115kV Tangent (1-Group of 9-Bells Each Assembly)	435	Assembly Assembly	\$ 1,800 \$ 900		\$ 720 \$ 560			
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	270	Assembly	\$ 1,800					\$ 680,400
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	14	Assembly	\$ 900					\$ 20,440
5.5	115KY Dead Cita & Arigie Institutors (1 Group of 5 Bells Educit Assertion)		Assembly	Ţ 300	\$ -	y 500	\$ -	\$ -	\$ -
5.6			Assembly		\$ -		\$ -	\$ -	\$ -
5.7			Assembly		\$ -		\$ -	\$ -	\$ -
5.8			Assembly		\$ -		\$ -	\$ -	\$ -
5.9			Assembly		\$ -		\$ -	\$ -	\$ -
5.10	OPGW Assembly - Tangent	111	Assembly	\$ 200					\$ 38,850
5.11	OPGW Assembly - Angle / DE	36	Assembly	\$ 250					\$ 14,400
5.12	OHSW Assembly - Tangent	77	Assembly	\$ 200			\$ 11,550	\$ 350	\$ 26,950
5.13 5.14	OHSW Assembly - Angle / DE OPGW Splice Boxes	16	Assembly Set	\$ 250 \$ 1,746	\$ 4,000 \$ 13,969	\$ 150 \$ 2,274		\$ 400 \$ 4,020	\$ 6,400 \$ 32,161
5.15	OPGW Splice & Test	8	EA	\$ 2,520	\$ 20,160	\$ 2,520	\$ 20,160	\$ 5,040	\$ 40,320
5.16	Spacer - Conductor	1,489	EA	\$ 50		\$ 35			
5.17	Vibration Dampers - Conductor	1,192	EA	\$ 35					
5.18	Shieldwire / OPGW Dampers, Misc. Fittings	646	EA	\$ 27		\$ 35			
5.19	Guys, Anchors, and Accessories	-	EA	\$ 720		\$ 885		\$ 1,605	
5.20	Misc. materials (Signs and Markers)	19.7	Mile	\$ 770		\$ 1,006		\$ 1,776	
	ILATORS, FITTINGS, HARDWARE: Smission Line Princetown to New Scotland				\$ 1,555,610 \$ 14,572,520		\$ 751,255 \$ 28,618,553		\$ 2,306,865 \$ 43,191,073
	IOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
O. IVIOD/DEIV	Contractor Mobilization / Demobilization								
	· · · · · · · · · · · · · · · · · · ·			·			- I		0 10 -657

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 431,911	\$ 431,911	\$ 431,911	\$ 431,911
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 2,076,195	\$ 2,076,195	\$ 2,076,195	\$ 2,076,195
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 431,911	\$ 431,911	\$ 431,911	\$ 431,911
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 431,911	\$ 431,911	\$ 431,911	\$ 431,911
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 2,159,554	\$ 2,159,554	\$ 2,159,554	\$ 2,159,554
6.6	Lidar	1	LS	\$ -	\$ -	\$ 129,573	\$ 129,573	\$ 129,573	\$ 129,573
6.7	Geotech	20	Location	\$ -	\$ -	\$ 3,500	\$ 70,000	\$ 3,500	\$ 70,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 302,338	\$ 302,338	\$ 302,338	\$ 302,338
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 129,573	\$ 129,573		
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ 215,000	\$ 215,000	\$ 215,000	\$ 215,000
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 2,313,000	\$ 2,313,000	\$ 2,313,000	\$ 2,313,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 1,165,802	\$ 1,165,802	\$ -	\$ -	\$ 1,165,802	\$ 1,165,802
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 43,191	\$ 43,191	\$ 43,191	\$ 43,191
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,165,802		\$ 8,774,156		\$ 9,939,957

D. Rotterdam Substation - Install

Estimate Revision: 5 Total: \$ 55,762,476

NG & NY Transco - T018 -	(Segment A)		
	Supply	Installation	Total
D. Rotterdam Substation - Install			
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ 189,745	\$ 1,156,225	\$ 1,345,970
2. SUBSTATION FOUNDATIONS	\$ 2,197,240	\$ 2,353,000	\$ 4,550,240
3. SUBSTATION STRUCTURES	\$ 372,220	\$ 372,220	\$ 744,440
4. MAJOR EQUIPTMENT	\$ 23,285,000	\$ 6,676,670	\$ 29,961,670
5. SMALL EQUIPTMENT / MATERIALS	\$ 1,164,540	\$ 675,000	\$ 1,839,540
6. CONTROL HOUSE / PANELS	\$ 3,396,670	\$ 1,285,545	\$ 4,682,215
7. MISC ITEMS	\$ 532,667	\$ 873,670	\$ 1,406,337
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ 2,491,047	\$ 8,741,017	\$ 11,232,064
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ 33,629,129	\$ 22,133,347	\$ 55,762,476
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ 33,629,129	\$ 22,133,347	\$ 55,762,476

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Su	upply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
D. Rotte	rdam Substation - Install										
1. SITE PREP/	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	3.25	ACRES	\$	-	\$ -	\$ 230,000	\$ 747,500	\$ 230,000	\$	747,500
1.2	Station stone within substation fence.	1,385	CY	\$	27	\$ 37,395	\$ 75	\$ 103,875	\$ 102	\$	141,270
1.3	Substation Fence	1,310	LF	\$	100	\$ 131,000	\$ 100	\$ 131,000	\$ 200	\$	262,000
1.4	Retaining Wall (1065' x 13')	0		\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
1.5	Compacted Fill (124,583cy Sand)	0		\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
1.6	Permanent Access Road - 20'-Wide	610	LF	\$	35	\$ 21,350	\$ 285	\$ 173,850	\$ 320	\$	195,200
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 189,745		\$ 1,156,225		\$	1,345,970
2. SUBSTATIO	N FOUNDATIONS										
2.1	345kV										
2.1a	Circuit Breaker Foundations	0	EA	\$	14,940	\$ -	\$ 16,000	\$ -	\$ 30,940	\$	-
2.1b	Capacitor Bank Foundations	1	EA	\$	56,025	\$ 56,025	\$ 60,000	\$ 60,000	\$ 116,025	\$	116,025
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$	26,145	\$ 209,160	\$ 28,000	\$ 224,000	\$ 54,145	\$	433,160
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$	-
2.1e	Switch Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1h	Bus Support 1 Ph Foundations	15	EA	\$	4,482	\$ 67,230	\$ 4,800	\$ 72,000	\$ 9,282	\$	139,230
2.1j	Instrument Transformer Stand Foundations	18	EA	\$	4,482	\$ 80,676	\$ 4,800	\$ 86,400	\$ 9,282	\$	167,076
2.1k	Arrester Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$	55,692
2.1m	Wave Trap Stand Foundations	2	EA	\$	4,482	\$ 8,964	\$ 4,800	\$ 9,600	\$ 9,282	\$	18,564
2.1n	Reactor Foundations	3	EA	\$	7,470	\$ 22,410	\$ 8,000	\$ 24,000	\$ 15,470	\$	46,410
2.1p	Transformer Firewalls	3	EA	\$	65,736	\$ 197,208	\$ 70,400	\$ 211,200	\$ 136,136	\$	408,408
2.1q											
2.2	230kV										
2.2a	Circuit Breaker Foundations	1	EA	\$,	\$ 11,952			\$ 24,752	_	24,752
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	. ,	\$ -	\$ 92,820	\$	-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$	22,410	\$ 89,640		\$ 96,000	\$ 46,410	\$	185,640
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$, .	\$ -	. ,	\$ -	\$ 46,410		-
2.2e	Switch Stand Foundations	4	EA	\$	-,	\$ 14,940	,	\$ 16,000	\$ 7,735		30,940
2.2f	Station Service Transformer Stand Foundation	0	EA	\$	3,735		\$ 4,000		\$ 7,735		-
2.2g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-

Item	Item Description E	Estimated Quantity	Unit of Measure	Material Su	ıpply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.2h	Bus Support 1 Ph Foundations	3	EA	\$	3,735	\$ 11,205	\$ 4,000	\$ 12,000	\$ 7,735	\$	23,205
2.2j	Instrument Transformer Stand Foundations	9	EA	\$	3,735	\$ 33,615	\$ 4,000	\$ 36,000	\$ 7,735	\$	69,615
2.2k	Arrester Stand Foundations	3	EA	\$	3,735	\$ 11,205	\$ 4,000	\$ 12,000	\$ 7,735	\$	23,205
2.2m	Wave Trap Stand Foundations	1	EA	\$	3,735	\$ 3,735	\$ 4,000	\$ 4,000	\$ 7,735	\$	7,735
2.2n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.2p											
2.3	115kV										
2.3a	Circuit Breaker Foundations	0	EA	\$	5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$	-
2.3b	Capacitor Bank Foundations	0	EA	\$	33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$	-
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$	16,434	\$ 131,472	\$ 17,600	\$ 140,800	\$ 34,034	\$	272,272
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$	-
2.3e	Switch Stand Foundations	0	EA	\$	2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3f	Fuse Stand Foundations	0	EA	\$	2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3g	Bus Support 3ph Foundations	0	EA	\$	2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3h	Bus Support 1 Ph Foundations	6	EA	\$	2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$	37,128
2.3j	Instrument Transformer Stand Foundations	6	EA	\$	2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$	37,128
2.3k	Arrester Stand Foundations	6	EA	\$	2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$	37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$	2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3n	Station Service Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.3p	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.4	Transformer Foundations										
2.4a	345-230kV Transformer Foundation w/ Oil Containment	1	EA	\$	97,110	\$ 97,110	\$ 104,000	\$ 104,000	\$ 201,110	\$	201,110
2.4b	345-115kV Transformer Foundation w/ Oil Containment	2	EA	\$	74,700	\$ 149,400	\$ 80,000	\$ 160,000	\$ 154,700	\$	309,400
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$	-
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.5	Control House Foundations / Pad										
2.5	Control House Foundations / Pad										
2.5a	Control House / Pad	1	EA	\$	862,785	\$ 862,785	\$ 924,000	\$ 924,000	\$ 1,786,785	\$	1,786,785
2.5b	Generator Foundation	1	EA	\$	16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$	33,000
2.6	Lightning Mast Foundations										
2.6a	70' Lightning Mast Foundation	8	EA	\$	5,229	\$ 41,832	\$ 5,600	\$ 44,800	\$ 10,829	\$	86,632
2.6b				\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.6c				\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
TOTAL - SURS	TATION FOUNDATIONS					\$ 2,197,240		\$ 2,353,000		Ś	4,550,240
	N STRUCTURES					2,137,240		2,333,000		Ÿ	.,550,240
3.1	345kV										
3.1a	Substation A-Frame Structures - Stand alone	2	EA	\$	37,000	\$ 74,000	\$ 37,000	\$ 74,000	\$ 74,000	\$	148,000
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$	37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$	
3.1c	Switch Stands	0	EA	\$	14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$	-
3.1d	Station Service Transformer Stand	0	EA	\$		\$ -	\$ 14,800	\$ -	\$ 29,600	\$	-
3.1e	Bus Support 3ph	0	EA	Ś	-	\$ -	\$ -	\$ -	\$ -	Ś	_
3.1f	Bus Support 1 Ph	15	EA	\$		\$ 55,500	\$ 3,700	\$ 55,500	\$ 7,400	\$	111,000
3.1g	Instrument Transformer Stand	18	EA	Ś		\$ 33,300	\$ 1,850	\$ 33,300	\$ 3,700	\$	66,600
3.1h	Arrester Stand	6	EA	\$		\$ 11,100	\$ 1,850	\$ 11,100	\$ 3,700	\$	22,200
3.1i	Wave Trap Stand	2					\$ 7,400	\$ 14,800		\$	29,600
3.11			EA	\$	7,400	\$ 14,800	15 /.400	5 14.800	\$ 14,800		

				Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate	TOTAL
	30kV								
	ubstation A-Frame Structures - Stand alone	1	EA	\$ 33,300	\$ 33,300	\$ 33,300	\$ 33,300	\$ 66,600	\$ 66,600
3.2b Sul	ubstation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -		\$ -	\$ 66,600	\$ -
	witch Stands	1	EA	\$ 12,025	\$ 12,025		\$ 12,025	\$ 24,050	\$ 24,050
	tation Service Transformer Stand	0	EA	\$ 12,025	\$ -	·	\$ -	\$ 24,050	\$ -
	us Support 3ph	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
	us Support 1 Ph	3	EA	\$ 2,775	\$ 8,325		\$ 8,325	\$ 5,550	\$ 16,650
	nstrument Transformer Stand	9	EA	\$ 1,295	\$ 11,655		\$ 11,655	\$ 2,590	\$ 23,310
	rrester Stand	3	EA	\$ 1,295	\$ 3,885		\$ 3,885	\$ 2,590	\$ 7,770
	Vave Trap Stand	1	EA	\$ 5,550	\$ 5,550	·	\$ 5,550	\$ 11,100	\$ 11,100
	Aisc. Structures	0	EA	\$ 6,475	\$ -		\$ -	\$ 12,950	\$ -
				7 0,	,	7 7,110	*	7 ==,000	*
3.3 11!	15kV								
	ubstation A-Frame Structures - Stand alone	2	EA	\$ 18,500	\$ 37,000	\$ 18,500	\$ 37,000	\$ 37,000	\$ 74,000
	ubstation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	·	\$ -	\$ 37,000	\$ -
	witch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955	•	\$ 15,910	-
	use Stand	0	EA	\$ 7,955	\$ -	,	\$ -	\$ 15,910	
	us Support 3ph	0	EA	\$ 3,330	\$ -		\$ -	\$ 6,660	
	us Support 1 Ph	6	EA	\$ 1,850	\$ 11,100	,	\$ 11,100	\$ 3,700	\$ 22,200
	nstrument Transformer Stand	6	EA	\$ 740	\$ 4,440	·	\$ 4,440	\$ 1,480	\$ 8,880
	rrester Stand	6	EA	\$ 740	\$ 4,440	\$ 740		\$ 1,480	-
	Vave Trap Stand	0	EA	\$ 3,700	\$ -		\$ -	\$ 7,400	\$ -
 	Aisc. Structures	0	EA	\$ 6,475	\$ -	,	\$ -	\$ 12,950	-
5.5%	instructures		271	9,113	<u> </u>	φ σ,σ	•	Ψ 12,550	Ť
TOTAL - SUBSTAT	TION STRUCTURES				\$ 372,220		\$ 372,220		\$ 744,440
4. MAJOR EQUIPT	TMENT				ψ 372,220		ŷ 372,220		711,110
	45kV								
4.1a Cir	ircuit Breakers	0	EA	\$ 200,000	\$ -	\$ 80,000	\$ -	\$ 280,000	\$ -
4.1b Ca	apacitor Banks with Reactors	1	EA	\$ 370,000	\$ 370,000	\$ 80,000	\$ 80,000	\$ 450,000	\$ 450,000
4.1c 34	45 kV - 230 kV Auto Transformer	1	EA	\$ 3,700,000	\$ 3,700,000	\$ 750,000	\$ 750,000	\$ 4,450,000	\$ 4,450,000
	45 kV - 115 kV Auto Transformer	2	EA	\$ 3,200,000	\$ 6,400,000		\$ 1,500,000	\$ 3,950,000	\$ 7,900,000
	45 kV (3) Bay Breaker-and-a-half GIS system with building	1	EA	\$ 12,700,000	\$ 12,700,000		\$ 4,266,670	\$ 16,966,670	\$ 16,966,670
	30kV	_				,,,	,,,		
	ircuit Breakers	1	EA	\$ 115,000	\$ 115,000	\$ 80,000	\$ 80,000	\$ 195,000	\$ 195,000
	apacitor Banks	0	EA	\$ -	\$ -		\$ -	\$ 80,000	\$ -
						,	·	,	
4.3 11!	15kV								
	ircuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b Ca	apacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
								-	
TOTAL - MAJOR EG	EQUIPTMENT				\$ 23,285,000		\$ 6,676,670		\$ 29,961,670
5. SMALL EQUIPTI	TMENT / MATERIALS								
	45kV								
5.1a Lin	ine Switches - 3ph w/ motor operator	2	EA	\$ 40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$ 110,000
5.1b Dis	isconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	\$ -
5.1c VT	T'S	6	EA	\$ 13,000	\$ 78,000	\$ 12,000	\$ 72,000	\$ 25,000	\$ 150,000
5.1d CT	T'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
-	CVT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.1e CC				,					

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
5.1g	Wave Traps	2	EA	\$ 13,000	\$ 26,000	\$ 8,000	\$ 16,000	\$ 21,000	\$	42,000
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$	250,000
5.1j										
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	1	EA	\$ 35,000	\$ 35,000	\$ 15,000	\$ 15,000	\$ 50,000	\$	50,000
5.2b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 30,000	\$ 30,000	\$ 17,500	\$ 17,500	\$ 47,500	\$	47,500
5.2c	VT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$	63,000
5.2d	CT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$	63,000
5.2e	CCVT'S	3	EA	\$ 10,000	\$ 30,000	\$ 6,000	\$ 18,000	\$ 16,000	\$	48,000
5.2f	Arresters	6	EA	\$ 5,000	\$ 30,000	\$ 6,000	\$ 36,000	\$ 11,000	\$	66,000
5.2g	Wave Traps	1	EA	\$ 13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$	21,000
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.2j										
5.3	115kV									
5.3a	Line Switches - 3ph w/ motor operator	2	EA	\$ 33,000	\$ 66,000	\$ 15,000	\$ 30,000	\$ 48,000	\$	96,000
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -		\$ -	\$ 45,500	\$	-
5.3c	VT'S	6	EA	\$ 13,000	\$ 78,000			\$ 21,000	_	126,000
5.3d	CT'S	6	EA	\$ 13,000	\$ 78,000		\$ 48,000	\$ 21,000		126,000
5.3e	CCVT'S	6	EA	\$ 8,000	\$ 48,000		\$ 48,000	\$ 16,000		96,000
5.3f	Arresters	12	EA	\$ 3,420	\$ 41,040		\$ 72,000	\$ 9,420	\$	113,040
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	Ś	
5.3h	Station Service Transformers	0	EA	\$ -	\$ -		\$ -	\$ -	\$	
5.3j	Fuses	0	EA	\$ -	\$ -		\$ -	\$ -	\$	-
3.3	14363		EA .	,	,	Ÿ	,	<u> </u>	_	
TOTAL - SMAI	L EQUIPTMENT / MATERIALS				\$ 1,164,540		\$ 675,000		\$	1,839,540
6. CONTROL H	OUSE / PANELS / GENERATOR									
6.1	CONTROL HOUSE (70'x135'x22')	1	EA	\$ 1,653,750	\$ 1,653,750	\$ 212,625	\$ 212,625	\$ 1,866,375	\$	1,866,375
6.2	Protection and Telecom Equipment Panels	30	EA	\$ 35,000	\$ 1,050,000	\$ 10,000	\$ 300,000	\$ 45,000	\$	1,350,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$	200,000
6.4	Control Cables	1	LS	\$ 227,920	\$ 227,920	\$ 227,920	\$ 227,920	\$ 455,840	\$	455,840
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ 3,396,670		\$ 1,285,545		\$	4,682,215
7. MISC ITEM							1,200,040			.,,
7.1	Conduit & Cable Trench System	200	LF	\$ 185.00	\$ 37,000	\$ 170.00	\$ 34,000	\$ 355	\$	71,000
7.2	Rigid Bus, Fittings & Insulators	100	LF	\$ 125.07	\$ 12,507	\$ 237.10	\$ 23,710	\$ 362	\$	36,217
7.3	Strain Bus, Connectors & Insulators	0	LF	\$ 39.30	\$ -	\$ 53.35	\$ -	\$ 93	\$	-
7.4	Grounding System	12,000	LF	\$ 6.93	\$ 83,160	\$ 32.58	\$ 390,960	\$ 40	\$	474,120

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$ -
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$ -
7.7	Strain Bus Insulators - 115kV	0	EA	\$	1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$ -
7.8	Low Voltage AC Station Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$ 125,000
7.9	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$ 90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$ 250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$ 360,000
TOTAL - MISC	ITEMS					\$ 532,667		\$ 873,670		\$ 1,406,337
D. Rotte	rdam Substation - Install					\$ 31,138,082		\$ 13,392,330		\$ 44,530,412
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
8.1	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 445,304	\$ 445,304	\$ 445,304	\$ 445,304
	Project Management, Material Handling & Amenities									
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 2,140,577	\$ 2,140,577	\$ 2,140,577	\$ 2,140,577
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 445,304	\$ 445,304	\$ 445,304	\$ 445,304
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 445,304	\$ 445,304	\$ 445,304	\$ 445,304
	Engineering									
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 3,562,433	\$ 3,562,433	\$ 3,562,433	\$ 3,562,433
8.6	LIDAR	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$ 14,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 311,713	\$ 311,713	\$ 311,713	\$ 311,713
	Testing & Commissioning									
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 1,113,260	\$ 1,113,260	\$ 1,113,260	\$ 1,113,260
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 133,591	\$ 133,591	\$ 133,591	\$ 133,591
8.13	Real Estate Costs (New)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	2,491,047	\$ 2,491,047	\$ -	\$ -	\$ 2,491,047	\$ 2,491,047
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 44,530	\$ 44,530	\$ 44,530	\$ 44,530
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 2,491,047		\$ 8,741,017		\$ 11,232,064

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NG & NY Transco - T018 - (Segment A) E. Rotterdam Substation - Removal

Estimate Revision: 5 Total: \$ 4,196,270

NG & NY Transco - 1	7018 - (Segment A)				
	Su	pply	Installation	Total	1
E. Rotterdam Substation - Removal					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ 1,472,750	\$ 1,	472,750
2. SUBSTATION FOUNDATIONS	\$	-	\$ 617,400	\$	617,400
3. SUBSTATION STRUCTURES	\$	-	\$ 534,900	\$	534,900
4. MAJOR EQUIPTMENT	\$	-	\$ 147,000	\$	147,000
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 169,500	\$	169,500
6. CONTROL HOUSE / PANELS	\$	-	\$ 150,000	\$	150,000
7. MISC ITEMS	\$	-	\$ 519,480	\$	519,480
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 585,240	\$	585,240
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	-	\$ 4,196,270	\$ 4,	196,270
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	\$	-	\$ 4,196,270	\$ 4,	196,270

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
E. Rotte	rdam Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	6.25	ACRES	\$ -	\$ -	\$ 203,000	\$ 1,268,750	\$ 203,000	\$ 1,268,750
1.2	Station stone within substation fence.	2,000	CY	\$ -	\$ -	\$ 102	\$ 204,000	\$ 102	\$ 204,000
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ 1,472,750		\$ 1,472,750
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
2.2a	Circuit Breaker Foundations	9	EA	\$ -	\$ -	\$ 7,200	\$ 64,800	\$ 7,200	\$ 64,800
2.2b	Capacitor Bank Foundations	2	EA	\$ -	\$ -	\$ 32,000	\$ 64,000	\$ 32,000	\$ 64,000
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	1	EA	\$ -	\$ -	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000
2.2d	Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	\$ 55,000
2.2e	Switch Stand Foundations	15	EA	\$ -	\$ -	\$ 5,200	\$ 78,000	\$ 5,200	\$ 78,000
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	59	EA	\$ -	\$ -	\$ 2,400	\$ 141,600	\$ 2,400	\$ 141,600
2.2j	Instrument Transformer Stand Foundations	15	EA	\$ -	\$ -	\$ 2,400	\$ 36,000	\$ 2,400	\$ 36,000
2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ -	\$ 2,400	\$ 14,400	\$ 2,400	\$ 14,400
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	3	EA	\$ -	\$ -	\$ 5,200	\$ 15,600	\$ 5,200	\$ 15,600
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	3	EA	\$ -	\$ -	\$ 42,000	\$ 126,000	\$ 42,000	\$ 126,000
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
									-
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				,			,		
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				,			,		
TOTAL - SUBST	ATION FOUNDATIONS				\$ -		\$ 617,400		\$ 617,400
	N STRUCTURES				Ţ		\$ 017,400		\$ 017,400
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g 3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1i	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
J.1K		0	- 25	· ·	* -	· ·	-	· ·	· ·
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	1	EA	\$ -	\$ -	\$ 27,000	\$ 27,000	\$ 27,000	\$ 27,000
3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	5	EA	\$ -	\$ -	\$ 27,000			
3.2c	Switch Stands	15	EA	\$ -	\$ -	\$ 27,000		\$ 27,000	
3.2d	Station Service Transformer Stand	0	EA	\$ -	\$ -		\$ 146,250		\$ 146,250
		4	EA					\$ 2,250	
3.2e	Bus Support 3ph Bus Support 4 Ph				-				
3.2f	Bus Support 1 Ph	59	EA	\$ -	\$ -	\$ 2,250		\$ 2,250	
3.2g	Instrument Transformer Stand	15	EA	\$ -	\$ -	\$ 1,050	\$ 15,750	\$ 1,050	\$ 15,750

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2h	Arrester Stand	6	EA	\$ -	\$ -	\$ 1,050	\$ 6,300	\$ 1,050	\$ 6,300
3.2j	Wave Trap Stand	3	EA	\$ -	\$ -	\$ 4,500	\$ 13,500	\$ 4,500	\$ 13,500
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ 30,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	3	EA	\$ -	\$ -	\$ 6,450	\$ 19,350	\$ 6,450	\$ 19,350
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	ATION STRUCTURES				\$ -		\$ 534,900		\$ 534,900
4. MAJOR EQU	IPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	9	EA	\$ -	\$ -	\$ 7,000	\$ 63,000	\$ 7,000	\$ 63,000
4.2b	Capacitor Banks	2	EA	\$ -	\$ -	\$ 42,000	\$ 84,000	\$ 42,000	\$ 84,000
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ 147,000		\$ 147,000
	PTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -			\$ 5,500	
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters	0	EA	\$ -	\$ -		\$ -	\$ 1,500	\$ -
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2	230kV				4	A	A		
5.2a	Line Switches - 3ph w/ motor operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
	Disconnect Switches - 3ph w/ manual operator	12	EA	\$ -	\$ -				
	VT'S	0		\$ -	\$ -		\$ -		\$ -
	CT'S	0		\$ -	\$ -		\$ -	\$ -	
	CCVT'S	8	EA	\$ -		\$ 1,500			. ,
5.2f	Arresters	15		\$ -	\$ -	\$ 2,500			
5.2g	Wave Traps	3		\$ -	\$ -	\$ 2,500			
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
5.3c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3e	CCVT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3f	Arresters	9	EA	\$ -	\$ -	\$ 1,500	\$ 13,500	\$ 1,500	\$ 13,500
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				s -		\$ 169,500		\$ 169,500
	OUSE / PANELS / GENERATOR				7		7 200,000		7 200,000
6.1	CONTROL HOUSE	1	EA	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ 130,000	\$ 130,000	\$ 130,000	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8		0	EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ -
6.9	Security	0			\$ -	\$ - \$ -	\$ - \$ -		\$ -
	Fire Alarm	0	EA EA			\$ - \$ -		\$ - \$ -	\$ -
6.10	Generator ROL HOUSE / PANELS / GENERATOR	U	EA	\$ -	\$ -	\$ -	\$ - \$ 150,000	\$ -	\$ 150,000
7. MISC ITEMS					-		\$ 130,000		3 130,000
7.1	Conduit & Cable Trench System	1	LS	\$ -	\$ -	\$ 42,000.00	\$ 42,000	\$ 42,000	\$ 42,000
7.2	Rigid Bus, Fittings & Insulators	3,200	LF	\$ -	\$ -	\$ 126.25	\$ 404,000	\$ 126	\$ 404,000
7.3	Strain Bus, Connectors & Insulators	800	LF	\$ -	\$ -	\$ 39.35	\$ 31,480	\$ 39	\$ 31,480
7.4	Grounding System	1	LS	\$ -	\$ -	\$ 42,000.00	·	\$ 42,000	\$ 42,000
					\$ -		\$ 519,480		\$ 519,480
	rdam Substation - Removal				\$ -		\$ 3,611,030		\$ 3,611,030
8. MOB/DEM	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
8.1	Contractor Mobilization / Demobilization	1	LS	\$ -	\$ -	\$ 36.110	\$ 36,110	\$ 36,110	\$ 36,110
0.1	Mob / Demob	1	LS	\$ -	Ş -	\$ 36,110	\$ 30,110	\$ 30,110	\$ 36,110
8.2	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 173,582	\$ 173,582	\$ 173,582	\$ 173,582
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 36,110	\$ 36,110	\$ 36,110	\$ 36,110
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 36,110			
	Engineering					, .	, -		
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 288,882	\$ 288,882	\$ 288,882	\$ 288,882
8.6	LiDAR	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	EA	\$ -	\$ -	\$ 3,500		\$ 3,500	
8.8	Surveying/Staking	_	Site	\$ -	\$ -	\$ 25,277		\$ 25,277	
	Testing & Commissioning			ļ ·		,		, ,,	-
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 90,276	\$ -	\$ 90,276	\$ -
	Permitting and Additional Costs			<u> </u>					
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.20	B a r a r a r a r a r a r a r a r a r a	I		1.7	1 7	T	T		T

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 10,833	\$ 10,833	\$ 10,833	\$ 10	0,833
8.13	Real Estate Costs (New)		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- 1
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 3,611	\$ 3,611	\$ 3,611	\$ 3	3,611
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 585,240		\$ 585	5,240

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F. Edic Substation - Install

Estimate Revision: 5 Total: \$ 2,587,379

NG & NY Transco - T018 -	(Segmen	t A)		
		Supply	Installation	Total
F. Edic Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,025	\$ 5,625	\$ 7,650
2. SUBSTATION FOUNDATIONS	\$	100,098	\$ 107,200	\$ 207,298
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$ 88,800
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$ 280,000
5. SMALL EQUIPTMENT / MATERIALS	\$	244,000	\$ 133,500	\$ 377,500
6. CONTROL HOUSE / PANELS	\$	173,850	\$ 98,850	\$ 272,700
7. MISC ITEMS	\$	339,357	\$ 507,880	\$ 847,237
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	88,298	\$ 417,896	\$ 506,194
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,192,028	\$ 1,395,351	\$ 2,587,379
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,192,028	\$ 1,395,351	\$ 2,587,379

Descri	ption of	Wo	rk:
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	te Materia	l Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
F. Edic S	ubstation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$	-	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$	27 \$	2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	0	LF		00 \$	-	\$ 100	\$ -	\$ 200	
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35 \$	-	\$ 285	\$ -	\$ 320	\$ -
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$	2,025		\$ 5,625		\$ 7,650
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	1	EA	\$ 14,9	40 \$	14,940	\$ 16,000	\$ 16,000	\$ 30,940	\$ 30,940
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,0	25 \$	-	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA		45 \$	-	\$ 28,000		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,1	45 \$	-	\$ 28,000	\$ -	\$ 54,145	
2.1e	Switch Stand Foundations	6	EA	\$ 4,4		26,892		\$ 28,800	\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,4	82 \$	-	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,4	82 \$	-	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	9	EA	\$ 4,4	82 \$	40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1k	Arrester Stand Foundations	3	EA	\$ 4,4	82 \$	13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$ 4,4	82 \$	4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,282
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,9	52 \$	-	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,8		-	\$ 48,000	\$ -	\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,4	10 \$	-	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,4	10 \$	-	\$ 24,000	\$ -	\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,7		-	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,7	35 \$	-	\$ 4,000		\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,7			\$ 4,000	'	\$ 7,735	•
2.2j	Instrument Transformer Stand Foundations	0		\$ 3,7		-	\$ 4,000		\$ 7,735	
2.2k	Arrester Stand Foundations	0		\$ 3,7		-	, , , , , , , , , , , , , , , , , , , ,		\$ 7,735	
2.2m	Wave Trap Stand Foundations	0	EA		35 \$	-	\$ 4,000		\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.3	115kV									
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,2		-	\$ 5,600	\$ -	\$ 10,829	
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,6		-	\$ 36,000	\$ -	\$ 69,615	
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,4		-	\$ 17,600	•	\$ 34,034	•
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,4		-	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 34,034	•
2.3e	Switch Stand Foundations	0	EA	\$ 2,9		-	,	\$ -	\$ 6,188	•
2.3f	Fuse Stand Foundations	0	EA	\$ 2,9		-	,		\$ 6,188	
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,9		-	\$ 3,200	'	\$ 6,188	•
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,9		-	,	\$ -	\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,9	88 \$	-	\$ 3,200	\$ -	\$ 6,188	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0		\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Control House Foundations / Pad				4		_		1
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightwing Most Foundations								
	Lightning Mast Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
	70' Lightning Mast Foundation	0	EA	T	:	\$ 5,600 \$ -			
	60' Lightning Mast Foundation 50' Lightning Mast Foundation	0	EA	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.00	30 Lightning Wast Foundation	0	EA	-	· -	, -	Ş -	· -	-
TOTAL - SURST	TATION FOUNDATIONS				\$ 100,098		\$ 107,200		\$ 207,298
3. SUBSTATION					\$ 100,030		7 107,200		201,230
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
	Switch Stands	1	EA	\$ 14,800	\$ 14,800		\$ 14,800	\$ 29,600	\$ 29,600
	Station Service Transformer Stand	0		\$ 14,800	\$ -		\$ -		\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0		\$ 3,700	\$ -		\$ -	\$ 7,400	
	Instrument Transformer Stand	9	EA	\$ 1,850	\$ 16,650		\$ 16,650	\$ 3,700	
	Arrester Stand	3	EA	\$ 1,850	\$ 5,550		\$ 5,550	\$ 3,700	
3.1j	Wave Trap Stand	1	EA	\$ 7,400	\$ 7,400		\$ 7,400	\$ 14,800	\$ 14,800
3.1k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	230kV								
	Substation A-Frame Structures - Stand alone	0		\$ 33,300	\$ -		\$ -	\$ 66,600	
	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -		\$ -	\$ 66,600	
	Switch Stands	0	EA	\$ 12,025	\$ -		\$ -	\$ 24,050	
	Station Service Transformer Stand	0		\$ 12,025	\$ -	\$ 12,025		\$ 24,050	
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Bus Support 1 Ph	0	EA	\$ 2,775	\$ -		\$ -	\$ 5,550	
	Instrument Transformer Stand	0	EA	\$ 1,295	\$ -		\$ -		\$ -
	Arrester Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$ -
	Wave Trap Stand	0	EA	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
2.2	115kV								
	Substation A-Frame Structures - Stand alone	0	ГА	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37.000	\$ -
	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA EA	\$ 18,500	\$ -	\$ 18,500 \$ 18,500	\$ -	\$ 37,000 \$ 37,000	
	Switch Stands	0		\$ 18,500	\$ -		\$ -	\$ 37,000	
	Fuse Stand	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -		\$ -
	Bus Support 3ph	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 6,660	
	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	
	Instrument Transformer Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	
	Arrester Stand	0	EA	\$ 740	т	\$ 740		\$ 1,480	
	Wave Trap Stand	0	EA	\$ 3,700		\$ 3,700		\$ 7,400	
	Misc. Structures	0	EA	\$ 6,475		\$ 6,475		\$ 12,950	
				.,		.,		,	
TOTAL - SUBST	TATION STRUCTURES				\$ 44,400		\$ 44,400		\$ 88,800
4. MAJOR EQU	JIPTMENT				, ,		,		,
	345kV								
	Circuit Breakers	1	EA	\$ 200,000	\$ 200,000	\$ 80,000	\$ 80,000	\$ 280,000	\$ 280,000
		0		\$ -	\$ -			\$ 80,000	
4.1b	Capacitor Banks	0	L/\	- ا	'	7 00,000	ا ۲	7 00,000	7
	345 kV - 230 kV Auto Transformer	0		\$ -		\$ 750,000		\$ 750,000	

A20 Capacron Feakers	TOTAL	Total Unit Rate	bor & Equipment Cost	L	Labor & Equipment Supply Rate	Material Supply Cost	erial Supply Rate	Mai	Unit of Measure	Estimated Quantity	Item Description	Item
A 28 Caparitor Bunks											230kV	4.2
Continued Cont	000 \$ -	\$ 195,000	-	\$	\$ 80,000	\$ -	115,000	\$	EA	0	Circuit Breakers	4.2a
4.30 Circuit Sewheren 0 EA 5 5.000 5 5 60,000 5 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000 5 60,000	000 \$ -	\$ 80,000	-	\$	\$ 80,000	\$ -	-	\$	EA	0	Capacitor Banks	4.2b
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4.39 Coopering From Part Fig.											115kV	
TOTAL MADER COUPTINET						т	52,000	<u> </u>				
\$ 1. SMALE CONTRICTOR MATERIALS \$ 1. SMALE CONTRICTOR MATERIAL	000 \$ -	\$ 60,000	-	\$	\$ 60,000	\$ -	-	\$	EA	0	Capacitor Banks	4.3b
\$ 1. SMALE CONTRICTOR MATERIALS \$ 1. SMALE CONTRICTOR MATERIAL				١.								
3.1 3439V	\$ 280,000		80,000	\$		\$ 200,000		_				
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\$2.20 Une Switches-3-gh w/ motor operator 0 EA \$ 85,000 \$. \$ 115,000 \$. \$ \$ 40,000 \$ 5 . \$ 127,000 \$ 5 . \$ 47,000 \$ 5 . \$ 47,000 \$ 5 . \$ 47,000 \$ 5 . \$ 47,000 \$ 5 . \$ 47,000 \$ 5 . \$ 47,000 \$ 5 . \$ 47,000 \$ 5 . \$ 47,000 \$ 5 . \$ 47,000 \$ 5 . \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$ 60,000 \$. \$ 5 . \$												
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\$2.50 CCTS	500 \$ -	\$ 47,500	-	\$	\$ 17,500	\$ -	30,000	\$	EA	0	Disconnect Switches - 3ph w/ manual operator	5.2b
S.Z. CCVTS	000 \$ -	\$ 38,000	-	\$	\$ 8,000	\$ -	30,000	\$	EA	0	VT'S	5.2c
S.71 Arresters	000 \$ -	\$ 21,000	-	\$	\$ 8,000	\$ -	13,000	\$	EA	0	CT'S	5.2d
\$2.50 Wave Traps	000 \$ -	\$ 16,000	-	\$	\$ 6,000	\$ -	10,000	\$	EA	0	CCVT'S	5.2e
Sample S		. ,	-	\$	\$ 6,000	\$ -	5,000	\$	EA		Arresters	5.2f
Sal			-			т	13,000					
5.3a	- \$ -	\$ -	-	\$	\$ -	\$ -	-	\$	EA	0		
S.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 28,000 \$ - \$ 1,7500 \$ - \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 5 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,000 \$ 36,												
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S.38 Arresters 0 EA S 3,420 S S 6,000 S S 9,420 S S S S S S S S S		, , , , , , , , , , , , , , , , , , , ,		_	,			<u> </u>				
S.38 Wave Traps												
Station service transformers 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$								_				
S Fuses	T	+'	-		+'	T .						
State Stat				-		т						
S.CONTROL HOUSE / PARELS / GENERATOR			133,500	- ' -	,	т		1	EA.	Ů		
6.1 CONTROL HOUSE	7 511,551		200,000	Ť		7 211,000						
6.2 Protection and Telecom Equipment Panels 3 EA \$ 35,000 \$ 105,000 \$ 30,000 \$ 45,000 \$ 6.3 125VD Batteries 0 EA \$ 75,000 \$ - \$ \$ 52,000 \$ - \$ 5 100,000 \$ 6.4 \$ 5 50,000 \$ - \$ 5 100,000 \$ 6.5 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,850 \$ 68,8	250 \$ -	\$ 636,250	-	\$	\$ 85,000	\$ -	551,250	\$	EA	0		
6.3 125VDC Batteries 0 EA \$ 75,000 \$ \$ \$ \$ \$ \$ \$ \$ \$				_								
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6.6			68,850			\$ 68,850		_				
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6.8 Security 6.8 Security 6.9 Fire Alarm 6.9 Generator 6.10 Generator 6.10 Generator 7.11 Conduit & Cable Trench System 7.2 Rigid Bus, Fittings & Insulators 7.3 Strain Bus Insulators 7.4 Grounding System 7.5 Strain Bus Insulators - 345kV 7.6 Strain Bus Insulators - 230kV 7.7 Strain Bus Insulators - 230kV 7.8 EA \$ 7,500 \$ - \$ 7,500 \$ - \$ 15,000 \$ 1,000 \$ - \$ 180,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$			-			\$ -						
6.9 Fire Alarm 6.9 Fire Alarm 6.10 Generator 0 EA \$ 7,500 \$ - \$ 7,500 \$ - \$ 15,000 \$ 6.10 CONTROL HOUSE / PANELS / GENERATOR 7.1 Conduit & Cable Trench System 7.2 Rigid Bus, Fittings & Insulators 7.3 Strain Bus, Connectors & Insulators 7.4 Grounding System 7.5 Strain Bus Insulators 7.6 Strain Bus Insulators - 345kV 7.7 Strain Bus Insulators - 230kV 7.7 Strain Bus Insulators - 230kV 7.7 Strain Bus Insulators - 115kV 7.8 Strain Bus Insulators - 115kV 7.9 EA \$ 1,000 \$ - \$ 500 \$ - \$ 1,000 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$				_				- ' -				
6.10 Generator												
TOTAL - CONTROL HOUSE / PANELS / GENERATOR \$ 173,850 \$ 98,850 \$ \$ 7.000 \$ 170,000 \$ 136,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,000 \$ 150,00				_				- ' -				
7. MISC ITEMS 800 LF \$ 185.00 \$ 148,000 \$ 170.00 \$ 136,000 \$ 355 \$ 7.2 Rigid Bus, Fittings & Insulators 0 L.S. \$ 75,042.00 \$ - \$ 142,260.00 \$ - \$ 217,302 \$ 7.3 Strain Bus, Connectors & Insulators 2,500 LF \$ 39.30 \$ 98,250 \$ 53.35 \$ 133,375 \$ 93 \$ 7.4 Grounding System 1 L.S. \$ 10,395.00 \$ 73,305.00 \$ 83,700 \$ 7.5 Strain Bus Insulators - 345kV 24 EA \$ 2,000 \$ 48,000 \$ 1,550 \$ 3,550 \$ 73,305.00 \$ 73,305.00 \$ 83,700 \$ 7 75.00 \$ 22,000 \$ 48,000 \$ 1,550 \$ 7,500 \$ 2,500 \$ <t< td=""><td>000 \$ -</td><td>\$ 180,000</td><td>-</td><td>\$</td><td>\$ 80,000</td><td>\$ -</td><td>100,000</td><td>\$</td><td>EA</td><td>0</td><td>Generator</td><td>6.10</td></t<>	000 \$ -	\$ 180,000	-	\$	\$ 80,000	\$ -	100,000	\$	EA	0	Generator	6.10
7. MISC ITEMS 800 LF \$ 185.00 \$ 148,000 \$ 170.00 \$ 136,000 \$ 355 \$ 7.2 Rigid Bus, Fittings & Insulators 0 L.S. \$ 75,042.00 \$ - \$ 142,260.00 \$ - \$ 217,302 \$ 7.3 Strain Bus, Connectors & Insulators 2,500 LF \$ 39.30 \$ 98,250 \$ 53.35 \$ 133,375 \$ 93 \$ 7.4 Grounding System 1 L.S. \$ 10,395.00 \$ 73,305.00 \$ 83,700 \$ 7.5 Strain Bus Insulators - 345kV 24 EA \$ 2,000 \$ 48,000 \$ 1,550 \$ 3,550 \$ 73,305.00 \$ 73,305.00 \$ 83,700 \$ 7 75.00 \$ 22,000 \$ 48,000 \$ 1,550 \$ 7,500 \$ 2,500 \$ <t< td=""><td></td><td></td><td></td><td></td><td></td><td>4</td><td></td><td></td><td></td><td></td><td>TROU HOUSE / DANIELS / SENERATOR</td><td>OTAL CC:</td></t<>						4					TROU HOUSE / DANIELS / SENERATOR	OTAL CC:
7.1 Conduit & Cable Trench System 800 LF \$ 185.00 \$ 148,000 \$ 170.00 \$ 136,000 \$ 355 \$ 7.2 Rigid Bus, Fittings & Insulators 0 L.S. \$ 75,042.00 \$ - \$ 142,260.00 \$ - \$ 217,302 \$ 7.3 Strain Bus, Connectors & Insulators 2,500 LF \$ 39.30 \$ 98,250 \$ 53.35 \$ 133,375 \$ 93 \$ 7.4 Grounding System 1 L.S. \$ 10,395.00 \$ 10,395.00 \$ 73,305.00 \$ 83,700 \$ 7.5 Strain Bus Insulators - 345kV 24 EA \$ 2,000 \$ 48,000 \$ 1,550 \$ 3,550 \$ 7.50 \$ - \$ 2,520 \$ 3,050 \$ 7.50 \$ - \$ 1,500 \$ - \$ 1	\$ 272,700		98,850	\$		\$ 173,850						
7.2 Rigid Bus, Fittings & Insulators 0 L.S. \$ 75,042.00 \$ - \$ 142,260.00 \$ - \$ 217,302 \$ 7.3 Strain Bus, Connectors & Insulators 2,500 LF \$ 39.30 \$ 98,250 \$ 53.35 \$ 133,375 \$ 93 \$ 7.4 Grounding System 1 L.S. \$ 10,395.00 \$ 73,305.00 \$ 73,305 \$ 83,700 \$ 7.5 Strain Bus Insulators - 345kV 24 EA \$ 2,000 \$ 48,000 \$ 1,050 \$ 25,200 \$ 3,050 \$ 7.6 Strain Bus Insulators - 230kV 0 EA \$ 1,400 \$ - \$ 750 \$ - \$ 2,150 \$ 7.7 Strain Bus Insulators - 115kV 0 EA \$ 1,000 \$ - \$ 550 \$ - \$ 1,550 \$	DEE 6 300.000	6 255	120,000	_	ć 470.00	ć 440.000	405.00	,	15	000		
7.3 Strain Bus, Connectors & Insulators 2,500 LF \$ 39.30 \$ 98,250 \$ 53.35 \$ 133,375 \$ 93 \$ 7.4 Grounding System 1 L.S. \$ 10,395.00 \$ 10,395 \$ 73,305.00 \$ 83,700 \$ 7.5 Strain Bus Insulators - 345kV 24 EA \$ 2,000 \$ 48,000 \$ 1,050 \$ 25,200 \$ 3,050 \$ 7.6 Strain Bus Insulators - 230kV 0 EA \$ 1,400 \$ - \$ 750 \$ - \$ 2,150 \$ 7.7 Strain Bus Insulators - 115kV 0 EA \$ 1,000 \$ - \$ 550 \$ - \$ 1,550 \$								\$ c				
7.4 Grounding System 1 L.S. \$ 10,395.00 \$ 73,305.00 \$ 73,305.5 \$ 83,700.5 7.5 Strain Bus Insulators - 345kV 24 EA \$ 2,000.5 48,000.5 \$ 1,050.5 \$ 25,200.5 \$ 3,050.5 7.6 Strain Bus Insulators - 230kV 0 EA \$ 1,400.5 - \$ 750.5 - \$ 2,150.5 \$ 2,150.5 \$ 2,150.5 \$ 1,550.5 - \$ 1,550.5 \$ 1,550.5 \$ 1,000.5 - \$ 550.5 - \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5 \$ 1,550.5				13	142,260.00	· ·	/5,042.00		L.S.		nigiu dus, rittliigs & Ilisuidtuis	1.2
7.5 Strain Bus Insulators - 345kV 24 EA \$ 2,000 \$ 48,000 \$ 1,050 \$ 25,200 \$ 3,050 \$ 7.50 7.6 Strain Bus Insulators - 230kV 0 EA \$ 1,400 \$ - \$ 750 \$ - \$ 2,150 \$ 7.70 7.7 Strain Bus Insulators - 115kV 0 EA \$ 1,000 \$ - \$ 550 \$ - \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550<	93 \$ 231,625	\$ 93	133,375	\$	\$ 53.35	\$ 98,250	39.30	\$	LF	2,500	Strain Bus, Connectors & Insulators	7.3
7.5 Strain Bus Insulators - 345kV 24 EA \$ 2,000 \$ 48,000 \$ 1,050 \$ 25,200 \$ 3,050 \$ 7.50 7.6 Strain Bus Insulators - 230kV 0 EA \$ 1,400 \$ - \$ 750 \$ - \$ 2,150 \$ 7.70 7.7 Strain Bus Insulators - 115kV 0 EA \$ 1,000 \$ - \$ 550 \$ - \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550 \$ 1,550<	700 \$ 83,700	\$ 82 700	73 305	5	\$ 73.305.00	\$ 10.305	10 395 00	4	I S	1	Grounding System	7.4
7.6 Strain Bus Insulators - 230kV 0 EA \$ 1,400 \$ - \$ 750 \$ - \$ 2,150 \$ 7.7 Strain Bus Insulators - 115kV 0 EA \$ 1,000 \$ - \$ 550 \$ - \$ 1,550 \$												
7.7 Strain Bus Insulators - 115kV 0 EA \$ 1,000 \$ - \$ 550 \$ - \$ 1,550 \$												
								_				
, , ,												
7.9 SSVT Service 0 LS \$ 45,000 \$ - \$ 45,000 \$ - \$ 90,000 \$												
7.10 Control Conduits from Trench to Equipment												

Item	ltem Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Su	pply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	20,712	\$	20,712	\$ 70,000	\$ 70,000	\$ 90,712	\$	90,712
TOTAL - MISC	ITEMS					\$	339,357		\$ 507,880		\$	847,237
F. Edic S	ubstation - Install					\$ 1	,103,730		\$ 977,455		\$	2,081,185
8. MOB/DEM	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:											
	Contractor Mobilization / Demobilization											
8.1	Mob / Demob	1.0	LS	\$	-	\$	-	\$ 20,812	\$ 20,812	\$ 20,812	\$	20,812
	Project Management, Material Handling & Amenities											
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS					\$ 100,043	\$ 100,043	\$ 100,043	\$	100,043
8.3	Utility PM and Project Oversite	1	LS			\$	-	\$ 20,812	\$ 20,812	\$ 20,812	\$	20,812
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$	-	\$ 20,812	\$ 20,812	\$ 20,812	\$	20,812
	Engineering											
8.5	Design Engineering	1	LS	\$	-	\$	-	\$ 166,495	\$ 166,495	\$ 166,495	\$	166,495
8.6	LiDAR	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-
8.7	Geotech	4	EA	\$	-	\$	-	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
8.8	Surveying/Staking	1	Site	\$	-	\$	-	\$ 14,568	\$ 14,568	\$ 14,568	\$	14,568
	Testing & Commissioning											
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$	-	\$ 52,030	\$ 52,030	\$ 52,030	\$	52,030
	Permitting and Additional Costs											
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 6,244	\$ 6,244	\$ 6,244	\$	6,244
8.13	Real Estate Costs (New)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-
8.15	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$	88,298	\$	88,298	\$ -	\$ -	\$ 88,298		88,298
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 2,081	\$ 2,081	\$ 2,081	_	2,081
TOTAL - MOB,	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	88,298		\$ 417,896		\$	506,194

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NG & NY Transco - T018 - (Segment A) G. Edic Substation - Removal

41,740

Total: \$

NG & NY Transco - T018 -	NG & NY Transco - T018 - (Segment A)											
	Sup	ply		Installation		Total						
G. Edic Substation - Removal												
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-						
2. SUBSTATION FOUNDATIONS	\$	-	\$	14,200	\$	14,200						
3. SUBSTATION STRUCTURES	\$	-	\$	6,750	\$	6,750						
4. MAJOR EQUIPTMENT	\$	-	\$	-	\$	-						
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	4,500	\$	4,500						
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-						
7. MISC ITEMS	\$	-	\$	10,500	\$	10,500						
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$	5,790	\$	5,790						
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	•						
SUBTOTAL:	\$	-	\$	41,740	\$	41,740						
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-						
TOTAL:	\$			41,740		41,740						

Description	of Work:								
Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
G. Edic S	Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1									
1.2									
1.3									
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15							_		
	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS								
2.1	345kV					44.000	4 4 200	4 44 200	4 44 44
2.1a 2.1b	Circuit Breaker Foundations	1 0	EA EA	\$ -	\$ -	\$ 14,200 \$ -	\$ 14,200 \$ -	\$ 14,200 \$ -	\$ 14,200 \$ -
	Capacitor Bank Foundations Caisson DE Foundations (for DE A frame str stand alone)	0		·	·	7	1		
2.1c 2.1d	Caisson DE Foundations (for DE A frame str stand alone) Caisson DE Foundations (for DE A frame str shared column)	0		\$ - \$ -	\$ -	•	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.1u 2.1e	Switch Stand Foundations Switch Stand Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e 2.1f	Station Service Transformer Stand Foundation	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1r	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g 2.1h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ 2,400		\$ 2,400	•
2.1ii	Instrument Transformer Stand Foundations	0		\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.1j	Arrester Stand Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0		\$ -	š -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0		\$ -	š -	\$ -	\$ -	\$ -	\$ -
2.1p		·	271	Ť	Ť	*	,	<u> </u>	*
2.15									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0		\$ -	\$ -	\$ 22,000		\$ 22,000	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0		\$ -	\$ -	\$ 11,000		\$ 11,000	
2.2e	Switch Stand Foundations	0		\$ -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ 2,400		\$ 2,400	
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	,								
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
				7	7	7	Ť	T	*
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
							•		
TOTAL - SUBS	TATION FOUNDATIONS				\$ -		\$ 14,200		\$ 14,200
	N STRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0							
3.1b	Substation A-Frame Structures - Shared Column		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Jaubstation A-riaine atructures - anareu Column	0	EA EA		\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	
3.1c			EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1c 3.1d	Switch Stands	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$ -
3.1d	Switch Stands Station Service Transformer Stand	0	EA EA EA	\$ - \$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
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Itam	Now Description	Estimated Quantity	Unit of Massure	Material County Date	Material County Cost	Labor & Equipment	Labor & Equipment	Total Unit Rate	TOTAL
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Onit Rate	IOIAL
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	ATION STRUCTURES				\$ -		\$ 6,750		\$ 6,750
4. MAJOR EQU	IPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	
						,,,,,,		,,,,,	
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capation Bullio		271	,	,	,	· ·	·	•
TOTAL - MAIO	R EQUIPTMENT				\$ -		\$ -		\$ -
	PTMENT / MATERIALS				7		J.		y .
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1a		0	EA	\$ -	\$ -			\$ 5,500	
	Disconnect Switches - 3ph w/ manual operator				\$ -				\$ -
5.1c	VT'S	0	EA	\$ -			\$ -		•
5.1d	CT'S	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
							-	·	
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	
5.2b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -		\$ -	\$ 5,500	
5.2c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -		\$ -		\$ -
5.2e	CCVT'S	0	EA	\$ -	\$ -		\$ -	\$ 1,500	
5.2f	Arresters	0		\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.2g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
									_
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.3c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3e	CCVT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arresters	0		\$ -		\$ 1,500		\$ 1,500	
	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
5.3h	Station Service Transformers	0		\$ -			\$ -		\$ -
5.3j	Fuses	0		\$ -	\$ -		\$ -		\$ -
<u> </u>		-							
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
	OUSE / PANELS / GENERATOR						.,500		.,500
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
	Protection and Telecom Equipment Panels	0		\$ -	\$ -		\$ -	\$ -	
				1.1	1.1		•		•

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - CONT	TROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEM	S								
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	1	LS	\$ -	\$ -	\$ 10,500.00	\$ 10,500	\$ 10,500	\$ 10,500
7.3	Strain Bus, Connectors & Insulators	0	EA	\$ -	\$ -	\$ 39.35	\$ -	\$ 39	\$ -
7.4	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
TOTAL - MISC	CITEMS				\$ -		\$ 10,500		\$ 10,500
G. Edic S	Substation - Removal				\$ -		\$ 35,950		\$ 35,950
8. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 360	\$ 360	\$ 360	\$ 360
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 1,728	\$ 1,728	\$ 1,728	\$ 1,728
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 360	\$ 360	\$ 360	\$ 360
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 360	\$ 360	\$ 360	\$ 360
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 2,876	\$ 2,876	\$ 2,876	\$ 2,876
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 252	\$ -	\$ 252	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 899	\$ -	\$ 899	\$ -
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 108	\$ 108	\$ 108	\$ 108
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 36	\$ -	\$ 36	\$ -
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 5,790		\$ 5,790

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G. SS Edic-Removal

H. New Scotland Substation - Install

Estimate Revision: Total: \$ 8,532,315

NG & NY Transco - T018	- (Segm	ent A)		
		Supply	Installation	Total
H. New Scotland Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	30,750	\$ 233,063	\$ 263,813
2. SUBSTATION FOUNDATIONS	\$	498,996	\$ 534,400	\$ 1,033,396
3. SUBSTATION STRUCTURES	\$	240,500	\$ 240,500	\$ 481,000
4. MAJOR EQUIPTMENT	\$	1,000,000	\$ 400,000	\$ 1,400,000
5. SMALL EQUIPTMENT / MATERIALS	\$	399,500	\$ 188,000	\$ 587,500
6. CONTROL HOUSE / PANELS	\$	749,150	\$ 372,900	\$ 1,122,050
7. MISC ITEMS	\$	897,304	\$ 1,093,110	\$ 1,990,414
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	305,296	\$ 1,348,847	\$ 1,654,143
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	4,121,496	\$ 4,410,819	\$ 8,532,315
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	4,121,496	\$ 4,410,819	\$ 8,532,315

Description of Work:	D	es	cr	ıpt	:10	n o	t W	or	k:
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Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
H. New S	Scotland Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0.94	ACRES	\$ -	\$ -	\$ 203,000	\$ 190,313	\$ 203,000	\$ 190,313
1.2	Station stone within substation fence.	250	CY	\$ 27				\$ 102	
1.3	Substation Fence	240	LF	\$ 100		\$ 100		\$ 200	
1.4	Permanent Access Road - 20'-Wide	0	LF	\$ 35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ 30,750		\$ 233,063		\$ 263,813
2. SUBSTATION	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	5	EA	\$ 14,940	\$ 74,700	\$ 16,000		\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 26,145	\$ 104,580	\$ 28,000		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145		\$ 28,000		\$ 54,145	
2.1e	Switch Stand Foundations	18	EA	\$ 4,482				\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	32	EA	\$ 4,482				\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	15	EA	\$ 4,482	\$ 67,230	\$ 4,800	\$ 72,000	\$ 9,282	\$ 139,230
2.1k	Arrester Stand Foundations	3	EA	\$ 4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$ 4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,282
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410		\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ 3,735		\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
									Page 20 of 57

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3	115kV				_				1
2.3a	Circuit Breaker Foundations	0		\$ 5,229	\$ -	\$ 5,600		\$ 10,829	
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ - \$ -			\$ 34,034 \$ 34.034	•
2.3d 2.3e	Caisson DE Foundations (for DE A frame str shared column) Switch Stand Foundations	0	EA EA	\$ 16,434 \$ 2,988	\$ - \$ -		\$ - \$ -	\$ 34,034 \$ 6,188	•
2.3f	Fuse Stand Foundations	0		\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3k	Arrester Stand Foundations	0		\$ 2,988	\$ -			\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600		\$ 157,794	
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	2		\$ 5,229	\$ 10,458			\$ 10,829	
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CURC	FATION FOUNDATIONS				¢ 400.00¢		ć 524.400		ć 1,022,20¢
	FATION FOUNDATIONS				\$ 498,996		\$ 534,400		\$ 1,033,396
3.1	N STRUCTURES 345kV								
3.1a	Substation A-Frame Structures - Stand alone	1	EA	\$ 37,000	\$ 37,000	\$ 37,000	\$ 37,000	\$ 74,000	\$ 74,000
3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ 37,000	\$ 37,000	\$ 37,000	\$ 74,000	\$ 74,000
3.1c	Switch Stands	3	EA	\$ 14,800	\$ 44,400		-	\$ 29,600	•
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -		. ,	\$ 29,600	
3.1e	Bus Support 3ph	0	EA	\$ -	<u> </u>	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	32	EA	\$ 3,700	\$ 118,400	•		\$ 7,400	•
3.1g	Instrument Transformer Stand	15	EA	\$ 1,850	\$ 27,750			\$ 3,700	
3.1h	Arrester Stand	3	EA	\$ 1,850	\$ 5,550			\$ 3,700	\$ 11,100
3.1j	Wave Trap Stand	1	EA	\$ 7,400	\$ 7,400	\$ 7,400	\$ 7,400	\$ 14,800	\$ 14,800
3.1k	Lightning Masts - 70'	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
	Switch Stands	0		\$ 12,025				\$ 24,050	
	Station Service Transformer Stand	0		\$ 12,025		\$ 12,025		\$ 24,050	
3.2e	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
3.2f	Bus Support 1 Ph	0		\$ 2,775		\$ 2,775		\$ 5,550	
3.2g	Instrument Transformer Stand	0		\$ 1,295	\$ -			\$ 2,590	
3.2h	Arrester Stand	0		\$ 1,295		\$ 1,295		\$ 2,590	
3.2j	Wave Trap Stand	0		\$ 5,550				\$ 11,100	
2.21.									
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -

3 Sump Search 1 1 1 1 1 1 1 1 1 1	Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2	3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
1.16 Rue Stand	3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
2.86 Box Support 20	3.3c	Switch Stands	0						\$ -		\$ -
3.13 But Squared Table									·		
3.5 District Stand											\$ -
3.30 Amended Sound 0 EA 5 740 5 - 5 740 5 - 5 740 5 - 5 740 5 - 5 740 5 - 5 740 5 - 5 740 5 - 5 - 740 5 - 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740 5 - 740									1		\$ -
23.1 Work Fine Starter											·
2.34 Most Structures									•		
TOTAL-SUBSTATION STRUCTURES								,			•
ALL MANUAL COURT MATER	3.31	Wilse. Structures	0	EA	3	0,473	· -	\$ 0,473	· -	Ş 12,530	· -
ALL MANUAL COURT MATER	TOTAL - SUBST	ATION STRUCTURES					\$ 240,500		\$ 240,500		\$ 481,000
A 10 Cloud Brosses S EA \$ 200,000 \$ 1,000,000 \$ 80,000 \$ 40,000 \$ 200,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,000 \$ 410,00							, ,,,,,,		, ,,,,,,		, ,,,,,
4.10 Capacitro Panks 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$	4.1	345kV									
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\$1.50	4.1b	Capacitor Banks	0			-	\$ -		\$ -	\$ 80,000	\$ -
## 4.29 Grapher Parks ## 4.20 Grapher Parks											\$ -
4.20 Circuit Breakers 0 EA \$ 115,000 \$. \$ 80,000 \$. \$ 5,000 \$ \$ 80,000 \$. \$ 5,000 \$ \$ 150,000 \$ \$ \$ \$ \$ \$ \$ \$ \$			0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.3 1154V				F.		445.000	<u>^</u>	ć 20.055	ć	A 405.055	^
4.3 STANK COUNTRY							•				
4.3 Circuit Breaters 0 EA S 5,000 S S 6,000 S S 112,000	4.20	Capacitor banks	0	EA	1>	-	ş -	ş 80,000	ş -	> 80,000	\$ -
4.3 Circuit Breaters 0 EA S 5,000 S S 6,000 S S 112,000	4.3	115kV									
4.3 Capaction Families Capacity Families			0	FA	Ś	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
TOTAL - MAJOR EQUIPMENT											<u> </u>
S. SMALE ROUPT MET F AMERICAS			-		1				•	, ,,,,,,	
S-1	TOTAL - MAJO	R EQUIPTMENT					\$ 1,000,000		\$ 400,000		\$ 1,400,000
Size Line Switchers - 3ph w/ matural operator 1	5. SMALL EQUI	PTMENT / MATERIALS									
S.10 Disconnect Switches - 3ph w/ manual operator 3 EA \$ 35,000 \$ 105,000 \$ 17,500 \$ 52,500 \$ 54,500 \$ 5.10 \$ \$ \$ \$ \$ \$ \$ \$ \$											
Site VTS											\$ 55,000
S.1d CTS S.2d S											\$ 157,500
S.1e CCVTS 6 EA \$ 13,000 \$ 78,000 \$ 48,000 \$ 21,000 \$ 5.1f 5.1f Arresters \$ 3 EA \$ 6,600 \$ 1,500 \$ 4,500 \$ 8,000 \$ 5.1f 5.0f \$ 5.1f										, , , , , , , , , , , , , , , , , , , ,	\$ 141,000
S.11											
S.1B					_						\$ 24,000
S.1h Station Service Transformers 0 EA S 200,000 S S S 50,000 S S 250,000 S S S 250,000 S S S S S S S S S											
S.13											
S-2a Line Switches - 3ph w/ manual operator 0 EA \$ 35,000 \$ - \$ 5,000 \$ 5.2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 30,000 \$ - \$ 17,500 \$ - \$ 47,500 \$ 5.2c VTS 0 EA \$ 30,000 \$ - \$ 5.2b 20,000 \$ 5.2b 20					1		*	+ 55,555	- T	+ =====================================	•
S-2a Line Switches - 3ph w/ motor operator 0 EA S 35,000 S - S 15,000 S - S 50,000 S S S S S S S S S											
S.2b Disconnect Switches - 3ph w/ manual operator 0 EA S 30,000 S - S 17,500 S - S 38,000 S S S 38,000 S S S S S S S S S	5.2	230kV									
S2c					-					,	•
S.2d CTS 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.2e CVTS 0 EA \$ 10,000 \$ - \$ 5,600 \$ - \$ 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5,600 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5,000 \$ 5 5 5 5 5 5 5 5 5											\$ -
S.2e CCVT'S 0 EA \$ 10,000 \$ - \$ 6,000 \$ - \$ 16,000 \$ 5.2f Arresters 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000 \$ 5 - \$ 5,000									•		\$ -
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S.2g Wave Traps 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.2h Station Service Transformers 0 EA \$ - \$ \$ - \$ \$ \$ \$ \$											
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S.2 S.3							т				\$ -
S.3 115kV					Ť				•		•
S.3a Line Switches - 3ph w/ motor operator S.3b Disconnect Switches - 3ph w/ manual operator S.3b Disconnect Switches - 3ph w/ manual operator S.3c VT'S S.3c VT'S S.3c											
5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 28,000 \$ - \$ 17,500 \$ - \$ 45,500 \$ 5.3c VT'S 0 EA \$ 28,000 \$ - \$ 8,000 \$ - \$ 36,000 \$ 5.3d CTS 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 8,000 \$ - \$ 16,000 \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 9,420 \$ - \$ 9,420 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	5.3	115kV									
5.3c VT'S 0 EA \$ 28,000 \$ - \$ 8,000 \$ - \$ 36,000 \$ 5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 16,000 \$ - \$ 16,000 \$ - \$ 9,420 \$ 5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ 9,420 \$ 5.3h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<		Line Switches - 3ph w/ motor operator	0		\$	33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 16,000 \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9,420 \$ - \$ 9,420 \$ - \$ 9,420 \$ - \$ 9,420 \$ - \$ 9,420 \$ - \$ 9,420 \$ - \$ - \$ 9,420 \$ - \$ - \$ 9,420 \$ - \$ - \$ 9,420 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -											\$ -
5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 16,000 \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9,420 \$ 5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -											
5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9,420 \$ 5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$											
5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -											
5.3h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <											
5.3j FUSES 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$											
TOTAL - SMALL EQUIPTMENT / MATERIALS \$ 399,500 \$ 188,000 \$ 6. CONTROL HOUSE / PANELS / GENERATOR											
6. CONTROL HOUSE / PANELS / GENERATOR	J.3J	1 4353	U	EA	۶		- ب	- ب	· -	- ب	-
6. CONTROL HOUSE / PANELS / GENERATOR	TOTAL - SMALL	EQUIPTMENT / MATERIALS					\$ 399 500		\$ 188,000		\$ 587,500
							- 555,500		200,000		- 357,500
6.1 CONTROL HOUSE 1 EA \$ 243,750 \$ 42,500 \$ 42,500 \$ 286,250 \$		CONTROL HOUSE	1	EA	\$	243,750	\$ 243,750	\$ 42,500	\$ 42,500	\$ 286,250	\$ 286,250

Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	т	OTAL
6.2	Protection and Telecom Equipment Panels	7	EA	\$	35,000	\$ 245,000	\$ 10,000	\$ 70,000	\$ 45,000	\$	315,000
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4	Control Cables	1	LS	\$:	260,400	\$ 260,400	\$ 260,400	\$ 260,400	\$ 520,800	\$	520,800
6.5	SCADA and Communications	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
	DC Distribution System	0	EA	\$	50,000		\$ 100,000	\$ -	\$ 150,000	\$	-
	Security	0	EA	\$	7,500		\$ 7,500	\$ -	\$ 15,000	\$	-
	Fire Alarm	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$	-
	OL HOUSE / PANELS / GENERATOR					\$ 749,150		\$ 372,900		\$	1,122,050
7. MISC ITEMS	0.120011.7.100	2.500.0	1.5		405.00	4 452 500	470.00	425.000	4 255		
7.1	Conduit & Cable Trench System	2,500.0	LF	\$	185.00	\$ 462,500	\$ 170.00	\$ 425,000	\$ 355		887,500
7.2	Rigid Bus, Fittings & Insulators	700.0	LF	\$	125.07	\$ 87,549	\$ 237.10	\$ 165,970	\$ 362	\$	253,519
7.3	Strain Bus, Connectors & Insulators	200.0	LF	\$	39.30	\$ 7,860	\$ 53.35	\$ 10,670	\$ 93	\$	18,530
7.4	Grounding System	1,500.0	LF	\$	6.93				\$ 40		59,265
	Strain Bus Insulators - 345kV	12	EA	\$	-,		1 ,		\$ 3,050		36,600
	Strain Bus Insulators - 230kV	0	EA	\$	1,400		\$ 750		\$ 2,150		-
	Strain Bus Insulators - 115kV	0	EA	\$	1,000		\$ 550		\$ 1,550		-
	Low Voltage AC Station Service SSVT Service	0	LS LS	\$	50,000 45,000	\$ - \$ -	\$ 75,000 \$ 45,000	\$ - \$ -	\$ 125,000 \$ 90,000	\$	
	Control Conduits from Trench to Equipment	1	LS		125,000	\$ 125,000	\$ 45,000	\$ 125,000	\$ 250,000	\$	250,000
	Misc. Materials (Above and Below Ground)	1	LS		180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
	Install new communication tower foundation	1	LS	\$		\$ -	\$ 75,000	\$ 75,000	\$ 75,000	\$	75,000
	Relocate existing communication tower	1	LS	\$		\$ -	\$ 50,000		\$ 50,000	-	50,000
7.14	•										
7.15											
7.16											
7.17											
7.18											
7.19 7.20											
7.21											
7.22											
7.23											
7.24 7.25											
TOTAL - MISC I	TFMS					\$ 897,304		\$ 1,093,110		\$	1,990,414
										Ś	
	cotland Substation - Install					\$ 3,816,200		\$ 3,061,973		ş	6,878,173
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization	1.0	15	\$		\$ -	\$ 68,782	¢ 60.703	\$ 68,782	Ś	68,782
	Mob / Demob Project Management, Material Handling & Amenities	1.0	LS	13	-	\$ -	۶ 58,/82	\$ 68,782	85,782 ج	Þ	08,/82
1 X/ I	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 330,634	\$ 330,634	\$ 330,634	\$	330,634
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 68,782	\$ 68,782	\$ 68,782	Ś	68,782
	Site Accommodation, Facilities, Storage	1		\$		\$ -	\$ 68,782				68,782
	Engineering										
	Design Engineering	1		\$		\$ -	\$ 550,254				550,254
	Lidar	-	LS	\$		\$ -		\$ -	\$ -	\$	-
	Geotech	4		\$			\$ 3,500				14,000
	Surveying/Staking	1	Site	\$	-	\$ -	\$ 48,147	\$ 48,147	\$ 48,147	\$	48,147
	Testing & Commissioning		1.6	-		<u> </u>	ć 474.05 <i>1</i>	ć 474.05 <i>1</i>	ć 474.05 <i>1</i>		474.67.
	Testing & Commissioning of T-Line and Equipment Permitting and Additional Costs	1	LS	\$	-	\$ -	\$ 171,954	\$ 171,954	\$ 171,954	>	171,954
	remitting and Additional Costs			1							

Item	Item Description	Estimated Quantity	Unit of Measure	Materi	al Supply Rate	Mat	terial Supply Cost	Labor & Equipment Supply Rate	ı	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 20,635	\$	20,635	\$ 20,635	\$ 20,635
8.13	Real Estate Costs (New)	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)		LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.17		-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	305,296	\$	305,296	\$ -	\$	-	\$ 305,296	\$ 305,296
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 6,878	\$	6,878	\$ 6,878	\$ 6,878
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	305,296		\$	1,348,847		\$ 1,654,143

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I. New Scotland Substation - Removal

Estimate Revision: 5 Total: \$ 184,697

NG & NY Transco - T018 - (Segment A)		
	Supply	Installation	Total
I. New Scotland Substation - Removal			
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	\$ 30,000	\$ 30,000
2. SUBSTATION FOUNDATIONS	\$ -	\$ 57,200	\$ 57,200
3. SUBSTATION STRUCTURES	\$ -	\$ 27,000	\$ 27,000
4. MAJOR EQUIPTMENT	\$ -	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$ 7,000	\$ 7,000
6. CONTROL HOUSE / PANELS	\$ -	\$ -	\$ -
7. MISC ITEMS	\$ -	\$ 37,875	\$ 37,875
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -	\$ 25,622	\$ 25,622
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ -	\$ 184,697	\$ 184,697
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ -	\$ 184,697	\$ 184,697

Description of Wo	UI IX.	

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
I. New S	cotland Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Substation Fence	200	LF	\$ -	\$ -	\$ 150	\$ 30,000	\$ 150	\$ 30,000
1.2									
1.3									
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ 30,000		\$ 30,000
	2. SUBSTATION FOUNDATIONS				7		30,000		30,000
	345kV								
2.1a	Circuit Breaker Foundations	2	EA	\$ -	\$ -	\$ 14,200	\$ 28,400	\$ 14,200	\$ 28,400
2.1b	Capacitor Bank Foundations	0	EA	\$ -			\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	12	EA	\$ -	\$ -	\$ 2,400	\$ 28,800	\$ 2,400	\$ 28,800
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV	-			_				
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -		\$ 32,000		\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA EA	\$ -		\$ 22,000		\$ 22,000 \$ 11,000	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0		\$ -	· ·	, , , , , , ,	\$ -		
2.2e	Switch Stand Foundations	0	EA EA	\$ - \$ -	\$ -	,	\$ -	\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	EA EA	'	· ·		\$ - \$ -	\$ - \$ -	\$ - \$ -
	Bus Support 3ph Foundations Bus Support 1 Ph Foundations	0	EA EA	\$ -	\$ -	т	\$ - \$ -	\$ - \$ 2,400	
2.211	Dus Support 1 FII Fouridations	U	EA		- ا	2,400	γ -	2,400	Page 25 of 57

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
	115kV								
	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Caisson DE Foundations (for DE A frame str shared column) Switch Stand Foundations	0	EA	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ -	\$ - \$ -
	Fuse Stand Foundations	0	EA EA	\$ -	\$ -	\$ 5,200 \$ -	l'	\$ 5,200 \$ -	
	Bus Support 3ph Foundations	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$ -
	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Arrester Stand Foundations	0	EA EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	<u>'</u>	\$ -
	Misc. Structure Foundations	0	EA	\$ -	š -	\$ -	\$ -		\$ -
		1		l ·	l.	i .	ļ.		•
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
							· ·		
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ -		\$ 57,200		\$ 57,200
	N STRUCTURES								
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	·	\$ -
	Bus Support 1 Ph	12	EA	\$ -	\$ -	\$ 2,250		\$ 2,250	
	Instrument Transformer Stand Arrester Stand	0	EA EA	\$ -	\$ - \$ -	\$ -	\$ -	\$ -	\$ -
		0		\$ -		\$ - \$ -		\$ -	\$ -
	Wave Trap Stand	0	EA EA	\$ -	7	1	1:	\$ - \$ -	\$ - \$ -
3.1K	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	
	Switch Stands	0	EA	\$ -	\$ -	\$ 9,750	'	\$ 9,750	
	Fuse Stand	0	EA	\$ -	\$ -	\$ 9,730	\$ -		\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -		\$ -		\$ -
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ 2,250		\$ 2,250	
	Instrument Transformer Stand	0		\$ -	\$ -			\$ 1,050	
	Arrester Stand	0	EA	\$ -	\$ -	\$ 1,050		\$ 1,050	
<u> </u>	Wave Trap Stand	0	EA	\$ -	\$ -			\$ 4,500	
3,2i					1.1	,500	1 .	,500	
			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2k			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -		\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450		\$ 6,450	
3.3d	Fuse Stand	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ - \$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA EA	\$ -		\$ -	\$ -	\$ - \$ -	\$ -
3.3j 3.3k	Wave Trap Stand Misc. Structures	0	EA EA	\$ -	\$ - \$ -		\$ - \$ -	\$ - \$ -	\$ - \$ -
3.3K	INISC. Structures	U	EA	ş -	\$ -	, -	, -	\$ -	, -
TOTAL - SUBST	ATION STRUCTURES				\$ -		\$ 27,000		\$ 27,000
4. MAJOR EQU					, -		\$ 27,000		\$ 27,000
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	R EQUIPTMENT				\$ -		\$ -		\$ -
	PTMENT / MATERIALS								
5.1	345kV							,	
5.1a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -		\$ -		\$ -
5.1c	VT'S	0	EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -
5.1d 5.1e	CT'S CCVT'S	0	EA EA	<u> </u>			\$ - \$ -		\$ - \$ -
5.1e 5.1f	Arresters	3	EA		\$ - \$ -		\$ 4,500	\$ 2,500 \$ 1,500	\$ 4,500
5.1g	Wave Traps	1	EA	\$ -	\$ -	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500
5.1j	Station service transformers	•	LA.	7	7	7	7	7	Ť
5.25									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	\$ -
5.2c	VT'S	0	EA		\$ -		\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	0	EA		\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.2f	Arresters	0	EA	\$ -	\$ -		\$ -	\$ 2,500	\$ -
5.2g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV		F.	ć	ć	ć	Ć	^	^
5.3a	Line Switches - 3ph w/ motor operator	0			\$ -	\$ - \$ 5.500	\$ -	\$ -	\$ -
5.3b 5.3c	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA EA	\$ - \$ -	\$ - \$ -	7 -,		\$ 5,500 \$ -	\$ - \$ -
5.3d	CT'S	0	EA EA		:		:	:	:
5.3e	CCVT'S	0			\$ -		\$ - \$ -		\$ - \$ -
5.3f	Arresters	0			\$ -	\$ 1,500		\$ 1,500	
5.3g	Wave Traps	0			\$ -		\$ -	\$ 1,300	\$ -
	Station Service Transformers	0			\$ -	\$ -			\$ -
	Fuses	0			\$ -		\$ -		\$ -
5.5,				l ·			•		
TOTAL - SMALI	L EQUIPTMENT / MATERIALS				\$ -		\$ 7,000		\$ 7,000
	OUSE / PANELS / GENERATOR						,		,
							_		
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -

7-3 Strain Res Connection & Resultations 0 15 5 5 5 21,000 5 5 22,000 5	Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
SCADA and Communications	6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
A	6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Red Security	6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Good Fee Name	6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Control Common Notes	6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL-CONTROLOGUE FANIES GRINDRATOR	6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Table Tabl	6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Table Tabl										
2.1 Conduit & Carbot French System	TOTAL - CONTE	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
2.1 Conduit & Carbot French System	7. MISC ITEMS									
2.2 Rigid Bus, Fittings, Brisslaters 300 CA 5 5 1,201.5 3,2787.5 3 126 5 3 3,2787.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 126 5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5 3,287.5		Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.4 Grounding System					\$ -	\$ -				
7.4 Grounding System						\$ -				
7.5						\$ -				
7.6					7	- T	,	7		
7.7										
7.8										
7.9										
7.10										
7.11										
7.12										
7.13										
Total										
TOTAL - MICK TEMPS										
S										
Second S		TENAC				A		A 27.075		å 27.075
R. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:						\$ -		\$ 37,875		\$ 37,875
Contractor Mobilization / Demobilization / Demobilizati	I. New So	cotland Substation - Removal				\$ -		\$ 159,075		\$ 159,075
Contractor Mobilization / Demobilization / Demobilizati	8. MOB/DEMO	B. ENGINEERING. PERMITTING. T&C. PM & INDIRECTS:								
8.1 Mob / Demob 1.0 LS S S S S S S S S										
Project Management, Material Handling & Amenities			1.0	LS	Ś -	\$ -	\$ 1.591	\$ 1.591	\$ 1.591	\$ 1,591
8.2 Project Management & Staffing (Includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite 1 LS 8.4 Site Accommodation, Facilities, Storage 1.0 LS 8.5 S 8.6 S 8.7 S		,			7	*	7 -,	7 2,002	7 -,555	7 -,
8.4 Site Accommodation, Facilities, Storage	8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ 7,647	\$ 7,647	\$ 7,647	\$ 7,647
8.4 Site Accommodation, Facilities, Storage	8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 1.591	\$ 1.591	\$ 1.591	\$ 1,591
Engineering					\$ -	\$ -				
8.5 Design Engineering 1.0 LS \$ - \$ - \$ \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 12,726 \$ 1					7		7 -,552	7 2,002	7 -/	7
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8.7 Geotech - Site S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S					'	T				
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Testing & Commissioning Fuline and Equipment Fultrage Fult			_			т		•		
R.9 Testing & Commissioning of T-Line and Equipment				Site	7	7	7 1,114	7	7 1,114	7
Permitting and Additional Costs			_	15	ė -	¢ .	¢ 3 077	ė -	¢ 3 077	\$ -
8.10 Environmental Licensing & Permitting Costs			_		-	· -	3,377	-	3,377	-
8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 -				10	ė	ė	ċ	ė	ċ	\$ -
8.12 Warranties / LOC's 1 LS \$ - \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 477 \$ 5 - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td></td> <td></td> <td></td> <td></td> <td>7</td> <td></td> <td>'</td> <td></td> <td></td>						7		'		
8.13 Real Estate Costs (New) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
8.14 Real Estate Costs (Incumbent Utility) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>т</td> <td></td> <td></td> <td></td> <td></td>						т				
8.15 Legal Fees - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						Ÿ			т	
8.16 Allowance for Funds Used During Construction (AFUDC) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td>										
8.17 - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td></td> <td></td> <td></td> <td>·</td> <td>7</td> <td></td> <td>'</td> <td></td> <td></td>					·	7		'		
8.18 Sales Tax on Materials 1.0 LS \$ - \$ - \$ - \$ 8.19 Fees for permits, including roadway, railroad, building or other local permits - LS \$ - \$ 1.59 \$ - \$ 159 \$		Allowance for Funds Used During Construction (AFUDC)			<u> </u>	т				
8.19 Fees for permits, including roadway, railroad, building or other local permits - LS \$ - \$ 159 \$ - \$ 159 \$						<u>'</u>				
					\$ -	т	т	'	7	т
TOTAL - MOB/DEMOB. ENGINEERING, PERMITTING, T&C. PM & INDIRECTS:			-	LS			\$ 159		\$ 159	
Y 23,022 Y 2.	TOTAL - MOB/I	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 25,622		\$ 25,622

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J. Porter Substation - Install

Estimate Revision: 5 Total: \$ 87,069

NG & NY Transco - T018 - (Segment A)										
	Supply Installation			Total						
J. Porter Substation - Install										
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-				
2. SUBSTATION FOUNDATIONS	\$	-	\$		\$	-				
3. SUBSTATION STRUCTURES	\$	-	\$	-	\$	-				
4. MAJOR EQUIPTMENT	\$	-	\$	-	\$	-				
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	-	\$	-				
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-				
7. MISC ITEMS	\$	15,008	\$	56,904	\$	71,912				
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,201	\$	13,956	\$	15,157				
CONTRACTOR MARK-UP (OH&P)	\$	-	\$		\$	-				
SUBTOTAL:	\$	16,209	\$	70,860	\$	87,069				
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-				
TOTAL:	\$	16,209	\$	70,860	\$	87,069				

ption of	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Porter	Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000		\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	
1.3	Substation Fence	0	LF	\$ 100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	NFOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ 14,940	\$ -	\$ 16,000		\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025	\$ -	\$ 60,000	·	\$ 116,025	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145	\$ -		\$ -	\$ 54,145	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145	\$ -		\$ -	\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	\$ 4,482	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 9,282	
	Station Service Transformer Stand Foundation	0	EA	\$ 4,482	\$ -	\$ 4,800	·	\$ 9,282	
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	·	\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,482	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 9,282	
2.1k	Arrester Stand Foundations	0	EA	\$ 4,482	\$ -	7 .,	\$ -	\$ 9,282	
2.1m	Wave Trap Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800		\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -		\$ -	\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -		\$ -	\$ 69,615	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	
	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -		\$ -
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -		\$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Control House Foundations / Pad				1		_		•
	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CLIDET	TATION FOUNDATIONS				*		Ċ.		<u> </u>
B. SUBSTATION	ATION FOUNDATIONS				\$ -		\$ -		\$ -
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1c	Switch Stands	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$ -
	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -		\$ -		\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -		\$ -	\$ 7,400	
	Instrument Transformer Stand	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	
	Arrester Stand	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	
	Wave Trap Stand	0	EA	\$ 7,400	\$ -	\$ 7,400	\$ -	\$ 14,800	
3.1k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2	230kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA		\$ -	\$ 33,300	\$ -	\$ 66,600	
	Switch Stands	0		\$ 12,025					
	Station Service Transformer Stand	0	EA	\$ 12,025		\$ 12,025		\$ 24,050	
	Bus Support 3ph	0	EA	\$ -	\$ -			\$ -	
	Bus Support 1 Ph	0	EA	' '				\$ 5,550	
	Instrument Transformer Stand	0	EA			\$ 1,295		\$ 2,590	
3.2h	Arrester Stand Wave Trap Stand	0	EA EA	\$ 1,295 \$ 5,550		\$ 1,295 \$ 5,550		\$ 2,590 \$ 11,100	
		1 0	LA	3,350 با		0,050 با	ا - ا	11,100	· -
3.2j		0	F۸	\$ 6,475	ς .	\$ 6,175	¢ _	\$ 12.050	¢ :
3.2j	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -		\$ -	\$ 6,660	
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3h	Arrester Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TO ALCOHOLOGICA CONTRACTOR OF THE CONTRACTOR OF								
	TATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU									
4.1	345kV			4 200,000	A	4 00 000	A	4 200,000	A
4.1a	Circuit Breakers	0	EA	\$ 300,000	\$ -	\$ 80,000	\$ -	\$ 380,000	
4.1b	Capacitor Banks	0		\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA EA	\$ - \$ -	\$ - \$ -		\$ - \$ -	\$ 750,000 \$ 750,000	
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	· -	\$ 750,000	\$ -	\$ 750,000	, -
4.2 4.2a	230kV Circuit Breakers	0	EA	\$ 250,000	\$ -	\$ 80,000	\$ -	\$ 330,000	\$ -
4.2a 4.2b	Capacitor Banks	0	EA EA			\$ 80,000	:	\$ 330,000	
4.20	Capacitor parity	U	EA	\$ -	\$ -	الالارانة د	\$ -	ب ۵۵٫۵۵۵	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 225,000	\$ -	\$ 60,000	\$ -	\$ 285,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
4.50	Capacitor banks	U	EA	- -	, -	3 00,000	· -	\$ 00,000	-
TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ -		\$ -
	IPTMENT / MATERIALS				-		· -		, -
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 40,000	\$ -	\$ 17,500	\$ -	30,000	\$ -
5.1c	VT'S	0	EA	\$ 35,000	\$ -		\$ -	\$ 47,000	
5.1d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.1e	CCVT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.1f	Arresters	0	EA	\$ 6,500	\$ -		\$ -	\$ 8,000	
5.1g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	
5.1j				,					
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 30,000	\$ -	\$ 15,000	\$ -	\$ 45,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	\$ -
5.2c	VT'S	0	EA	\$ 30,000	\$ -	\$ 8,000	\$ -	\$ 38,000	\$ -
5.2d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 28,000	\$ -	\$ 15,000	\$ -	\$ 43,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 33,000	\$ -	\$ 17,500	\$ -	\$ 50,500	
5.3c	VT'S	0	EA	\$ 28,000	\$ -	\$ 8,000	\$ -	\$ 36,000	
5.3d	CT'S	0		\$ 13,000					
5.3e	CCVT'S	0		\$ 8,000		\$ 8,000		\$ 16,000	
5.3f	Arresters	0		\$ 3,420				\$ 9,420	
5.3g	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
5.3h	Station Service Transformers	0		\$ -	\$ -		\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	1				A		•		•
	L EQUIPTMENT / MATERIALS				\$ -		\$ -		\$ -
	OUSE / PANELS / GENERATOR		FA.	ć 554.050	<u>^</u>	¢ 05.000	ć	ć cac asa	A
6.1	CONTROL HOUSE	0	EA	\$ 551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$ -

8.3 Utility PM and Project Oversite 1 LS \$ - \$ 719 \$ 719 \$ 719 \$ 8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719 \$ 719	Total Unit Rate	TOTAL
6.4 Control Cables 0 15 5 5 5 5 5 5 5 5	\$ 45,000 \$	-
6.5 SCADA and Communications 0 EA \$	\$ 100,000 \$	-
6.6 Low Voltage AC Burtifuction 0 EA \$ \$0,000 \$ \$ \$ \$100,000 \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ - \$	-
6.7 CO Estribution System	\$ - \$	-
6.8 Security	\$ 150,000 \$	-
6.8 Security	\$ 150,000 \$	-
6-9 Fire Alarm	\$ 15,000 \$	-
E-10 Generator	\$ 15,000 \$	_
TOTAL - CONTROL HOUSE / PANELS / GENERATOR	\$ 180,000 \$	_
Text	150,000 \$	
Text	Ś	
7.1 Conduit & Calle Trench System 0 IF S 185.00 S S 170.00 S C	3	-
7.2 Rigid Bus, Fittings & Insulators	255 6	
7.3 Strain Bus, Connectors & Insulators 0 LF 5 13.38 5 5 39.35 5 7.4 Grounding System 0 LF 5 6.93 5 5 32.58 5 7.5 Strain Bus insulators - 365kV 0 EA 5 2,000 5 5 1,000 5 7.6 Strain Bus insulators - 325kV 0 EA 5 2,000 5 5 1,000 5 7.7 Strain Bus insulators - 325kV 0 EA 5 2,000 5 5 1,000 5 7.7 Strain Bus insulators - 325kV 0 EA 5 1,000 5 5 7,00 5 7.7 Strain Bus insulators - 325kV 0 EA 5 1,000 5 5 7,00 5 7.7 Strain Bus insulators - 325kV 0 EA 5 1,000 5 5 7,00 5 7.8 Low Valeage AC Stains basin Service 0 EA 5 1,000 5 5 7,000 5 7.8 Low Valeage AC Stains nervice 0 EA 5 1,000 5 5 7,000 5 7.9 SOVT Service 0 EA 5 1,000 5 5 7,000 5 7.10 Control Condulis from Trench to Equipment 0 ES 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 7.11 Misc. Materials (Above and Below Ground) 0 ES 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,000 5 5 125,00	\$ 355 \$	-
7.4 Grounding System	\$ 71,912 \$	71,912
7.5 Strain Bus Insulators - 345kV	\$ 53 \$	-
Trial Bus insulators - 230k7	\$ 40 \$	-
Trial Bus Insulators - 115kV	\$ 3,050 \$	-
7.7 Strain Bus Insulators - 115kV	\$ 2,150 \$	-
7.9 SVT Service	\$ 1,550 \$	-
7.9 SVT Service	\$ 125,000 \$	-
Control Conduits from Trench to Equipment 0 LS S 125,000 S S S S S S S S S	\$ 90,000 \$	-
Till Misc. Materials (Above and Below Ground) 0 1.5 \$ 180,000 \$ 	\$ 250,000 \$	-
7.12 7.13 7.14 7.15 7.16 7.17 7.18 7.19 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.25 7.27 7.28 7.28 7.29 7.20 7.20 7.20 7.21 7.22 7.23 7.24 7.25 7.25 7.26 7.27 7.28 7.29 7.29 7.20 7.20 7.20 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.28 7.29 7.29 7.20 7.20 7.20 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.25 7.20 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.25 7.26 7.27 7.28 7.29 7.29 7.20 7.20 7.20 7.20 7.20 7.21 7.20 7.20 7.20 7.20 7.20 7.20 7.20 7.20	\$ 360,000 \$	-
7.13 7.14 7.15 7.16 7.17 7.18 7.19 7.19 7.20 7.21 7.22 7.23 7.24 7.24 7.25 7.25 7.724 7.25 7.725 7.724 7.85 7.96 7.97 7.97 7.97 7.97 7.98 7.99 7.99 7.90 7.90 7.90 7.90 7.90 7.90	\$ 500,000 \$	
7.14	+	
7.15	+	
7.16	+	
7.17	+	
7.18		
7.19		
7.20		
7.21		
7.22 7.23 7.24 7.25 70TAL - MISC ITEMS 7.		
7.23		
7.24 7.25		
TOTAL - MISC ITEMS		
TOTAL - MISC ITEMS		
TOTAL - MISCITEMS \$ 15,008 \$ 56,904		
Sample Substation - Install Sample Sampl	Š	71,912
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization		
Contractor Mobilization / Demobilization Demobilization 1.0	\$	71,912
8.1 Mob / Demob 1.0 LS \$ - \$ 719 \$ 719 Project Management, Material Handling & Amenities 8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 1 LS \$ 3,457 \$ 3,457 8.3 Utility PM and Project Oversite 1 LS \$ - \$ 719 \$ 719 8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ 719 \$ 719		
8.1 Mob / Demob 1.0 LS \$ - \$ 719 \$ 719 Project Management, Material Handling & Amenities 8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 1 LS \$ 3,457 \$ 3,457 8.3 Utility PM and Project Oversite 1 LS \$ - \$ 719 \$ 719 8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ 719 \$ 719		
Project Management, Material Handling & Amenities 8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite 1 LS \$ 3,457 \$ 3,457 \$ 719 8.4 Site Accommodation, Facilities, Storage	\$ 719 \$	719
8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 1 LS \$ 3,457 \$ 3,457 8.3 Utility PM and Project Oversite 1 LS \$ - \$ 719 \$ 719 8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ 719 \$ 719		
8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ 719 \$ 719	\$ 3,457 \$	3,457
8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ 719 \$ 719	6 740 4	710
		719
	\$ 719 \$	719
Engineering	+	
8.5 Design Engineering 1 LS \$ - \$ 5,753 \$ 5,753	1.	5,753
8.6 LIDAR - LS \$ - \$ - \$ -		-
	\$ 3,500 \$	<u> </u>
8.8 Surveying/Staking 1 Site \$ - \$ - \$ 503 \$ 503	\$ 503 \$	503
Testing & Commissioning		
8.9 Testing & Commissioning of T-Line and Equipment 1 LS \$ - \$ - \$ 1,798 \$ 1,798	\$ 1,798 \$	1,798
Permitting and Additional Costs		
8.10 Environmental Licensing & Permitting Costs - LS \$ - \$ - \$ -	\$ - \$	-
		-
8.12 Warranties / LOC's 1 LS \$ - \$ - \$ 216 \$ 216		216
8.13 Real Estate Costs (New) - LS \$ - \$ - \$ -		-

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	1,201	\$ 1,201	\$ -	\$ -	\$ 1,201	\$ 1,201
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 72	\$ 72	\$ 72	\$ 72
TOTAL - MOB,	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,201		\$ 13,956		\$ 15,157

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J. SS Porter-Install

NG & NY Transco - T018 - (Segment A) K. Porter Substation - Removal

557,825

Total: \$

NG & NY Transco - T018 - (Segment A)										
		Supply		Installation		Total				
K. Porter Substation - Removal										
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-				
2. SUBSTATION FOUNDATIONS	\$	-	\$	126,600	\$	126,600				
3. SUBSTATION STRUCTURES	\$	-	\$	206,100	\$	206,100				
4. MAJOR EQUIPTMENT	\$	-	\$	43,500	\$	43,500				
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	59,500	\$	59,500				
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-				
7. MISC ITEMS	\$	-	\$	38,613	\$	38,613				
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$	83,512	\$	83,512				
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-				
SUBTOTAL:	\$	-	\$	557,825	\$	557,825				
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-				
					À					

iption	

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
K. Porter	Substation - Removal								
1. SITE PREP/ G	GRADING/ FENCING / CIVIL								
TOTAL - SITE PF	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATION	FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									·
2.2	230kV								
2.2a	Circuit Breaker Foundations	3	EA	\$ -	\$ -	\$ 7,200	\$ 21,600	\$ 7,200	\$ 21,600
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	\$ 55,000
2.2e	Switch Stand Foundations	5	EA	\$ -	\$ -	\$ 5,200	\$ 26,000	\$ 5,200	\$ 26,000
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations	4	EA	\$ -	\$ -	\$ 2,400	\$ 9,600	\$ 2,400	\$ 9,600
2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ -	\$ 2,400	\$ 14,400	\$ 2,400	\$ 14,400
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p		-							
· ·									
2.3	115kV								
	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str shared column)	0	EA		\$ -		\$ -	s -	\$ -

3.10	Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.5 3.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5	2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
1.20	2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.21 Marriage Transformer Researchers 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$						\$ -				
2.30 Work Ingel Assertations		Bus Support 1 Ph Foundations				\$ -			·	•
2.20 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000						'	•			
2.59 Miles Service Foundations 0						'				
Dec. Security Foundations										
Tendemore Touristation will Differentiation at 1						'		· .	·	
2-48 35-1284 Trensformer foundation of OL Contaminant 0 UA 5 3 5 5 5 5 5 5 5 5	2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2-48 35-1284 Trensformer foundation of OL Contaminant 0 UA 5 3 5 5 5 5 5 5 5 5										
2-26 2-30-15 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400 150-400					4	4	4		_	4
2.64 1315-05/14 Transferred Foundation of Discontaneers						·	'		•	
2.56		·				7				
2.5 Centrol House Foundations / Pad						·				
2-36 Control shouse / Find	2.40	115kV-69kV Transformer Foundation W/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2-36 Control shouse / Find	2.5	Control House Foundations / Red								
2-50 Generator Foundation				FA.	ć	ć	ć	ć	ć	ć
2.6 Spring Mast Foundations						7	'	'		•
2.6a 77 Lightney Mast Foundation	2.50	Generator Fouridation	0	EA	· ·	· -	· -	· -	<i>γ</i> -	· -
2.6a 77 Lightney Mast Foundation	26	Lightning Mast Foundations								
2.66			0	ΕΛ	ċ	ċ	ė	ć	ċ	ć
266		70 Lightning Wast Foundation					'	'		•
S						-				
3.1 SASAY	2.60		U	EA	ş -	ş -	ş -	\$ -	, -	ş -
3.1 SASAY	TOTAL - SUBST	TATION FOUNDATIONS				Ċ -		\$ 126,600		\$ 126,600
3.1						7		7 120,000		7 120,000
3.13 Substation A-Frame Structures - Stand cloum										
Substation A-frame Structures - Shared Column			0	FΔ	¢ -	¢ -	¢ .	¢ .	\$ -	¢ .
3.1d Switch Stands					'	т		'		•
3.1d Station Service Transformer Stand 0 EA S S S S S S S						'	•			
3.18 Bus Support 3ph 0 EA S S S S S S S S S						'				•
3.11 Bus Support 1Ph						'				
3.1 Instrument Transformer Stand						'		· .		•
3.1h Arrester Stand						\$ -				
3.11 Wave Trap Stand						·			•	•
3.1k Misc. Structures 0 EA S S S S S S S S S						·	•	·		
3.2 230kV							•		•	
3.2a Substation A-Frame Structures - Stand alone 0										
3.2 b	3.2	230kV								
3.2c Switch Stands 6 EA S - S - S 9,750 S 58,500 S 9,750 S 58,500 S 3,260 S 3,261 Station Service Transformer Stand 0 EA S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S -	3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2d Station Service Transformer Stand 0 EA S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S -	3.2b	Substation A-Frame Structures - Shared Column	5	EA	\$ -	\$ -	\$ 27,000	\$ 135,000	\$ 27,000	\$ 135,000
3.2e Bus Support 3ph 0 EA S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S	3.2c	Switch Stands	6	EA	\$ -	\$ -	\$ 9,750	\$ 58,500	\$ 9,750	\$ 58,500
3.2f Bus Support 1 Ph	3.2d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2g Instrument Transformer Stand 6 EA \$ - \$ - \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 3.2h Arrester Stand 6 EA \$ - \$ 5 - \$ 5 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 3.2h Arrester Stand 6 EA \$ - \$ 5 - \$ 5 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050 \$ 1,050	3.2e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -		
3.2g Instrument Transformer Stand 6 EA S - S - S 1,050 S 6,300 S 1,050 S 6,300 3.2h Arrester Stand 6 EA S - S - S 1,050 S 6,300 S 1,050 S 6,300 3.2l Wave Trap Stand 0 EA S - S - S 4,500 S - S 4,500 S 3.2k Misc. Structures 0 EA S - S - S - S - S - S 3.2k Misc. Structures 0 EA S - S - S - S - S - S 3.3a Substation A-Frame Structures - Stand alone 0 EA S - S - S - S - S - 3.3a Substation A-Frame Structures - Stand alone 0 EA S - S - S - S - S - 3.3c Switch Stands 0 EA S - S - S - S - S - S 3.3d Fuse Stand 0 EA S - S - S - S - S - 3.3e Bus Support 3ph 0 EA S - S - S - S - S - 3.3f Bus Support 1Ph 0 EA S - S - S - S - S - 3.3g Instrument Transformer Stand 0 EA S - S - S - S - S - 3.3g Instrument Transformer Stand 0 EA S - S - S - S - S - 3.3g Wave Trap Stand 0 EA S - S - S - S - S - S - 3.3g Wave Trap Stand 0 EA S - S - S - S - S - S - 3.3g Wave Trap Stand 0 EA S - S - S - S - S - S - 3.3g Wave Trap Stand 0 EA S - S - S - S - S - S - S - 3.3g Wave Trap Stand 0 EA S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S -	3.2f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	\$ -
3.2h Arrester Stand 6 EA \$ - \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 \$ 1,050 \$ 4,500 \$ - \$ 4,500 \$ - \$ 4,500 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	3.2g		6	EA	\$ -	\$ -	\$ 1,050	\$ 6,300	\$ 1,050	\$ 6,300
3.2k Misc. Structures			6	EA	\$ -	\$ -	\$ 1,050	\$ 6,300	\$ 1,050	\$ 6,300
3.3 115kV	3.2j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ 4,500	\$ -	\$ 4,500	\$ -
3.3 115kV	3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ 15,000 \$ - \$ 15,000 \$ - \$ 15,000 \$ - \$ 15,000 \$ - \$ 15,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
3.3b Substation A-Frame Structures - Shared Column 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td< td=""><td>3.3</td><td>115kV</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	3.3	115kV								
3.3c Switch Stands 0 EA \$ - \$ 6,450 \$ - \$ 6,450 \$ - \$ 6,450 \$ - \$ 6,450 \$ - \$ 6,450 \$ - \$ 6,450 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ </td <td>3.3a</td> <td>Substation A-Frame Structures - Stand alone</td> <td>0</td> <td>EA</td> <td>\$ -</td> <td>\$ -</td> <td></td> <td>\$ -</td> <td></td> <td>\$ -</td>	3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -		\$ -		\$ -
3.3d Fuse Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	3.3c	Switch Stands	0	EA				\$ -		
3.3f Bus Support 1 Ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
3.3g Instrument Transformer Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - </td <td></td>										
3.3h Arrester Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						'				
3.3j Wave Trap Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	3.3g	Instrument Transformer Stand	0			\$ -			\$ -	\$ -
3.3k Misc. Structures 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$						\$ -				
		Wave Trap Stand	0			\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBSTATION STRUCTURES \$ - \$ 206,100 \$ 206,100	3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBSTATION STRUCTURES \$ 206,100 \$ 206,100										
	TOTAL - SUBST	TATION STRUCTURES				\$ -		\$ 206,100		\$ 206,100

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
4. MAJOR EQU	IPTMENT								
	345kV								
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
	230kV								
4.2a	Circuit Breakers	3	EA	\$ -	\$ -	\$ 14,500	\$ 43,500	\$ 14,500	\$ 43,500
	Capacitor Banks	0		\$ -	\$ -		\$ -	\$ 42,000	
						,,,,,,	,	,,,,,,	
4.3	115kV								
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0		\$ -	\$ -		\$ -	\$ -	\$ -
TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ 43,500		\$ 43,500
5. SMALL EQUI	PTMENT / MATERIALS								
	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	
	VT'S	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -		\$ -
	Arresters	0		\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j	Station Service mansionners	ű	L,	*	·	·	· ·	·	*
3.1									
5.2	230kV								
	Line Switches - 3ph w/ motor operator	2	EA	\$ -	\$ -	\$ 5,500	\$ 11,000	\$ 5,500	\$ 11,000
	Disconnect Switches - 3ph w/ manual operator	3		\$ -	\$ -		\$ 16,500	\$ 5,500	
	VT'S	2		\$ -	\$ -	\$ 1,500	\$ 3,000	\$ 1,500	\$ 3,000
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	6	EA	\$ -	\$ -	\$ 1,500	\$ 9,000	-	\$ 9,000
5.2f	Arresters	6		\$ -	\$ -	\$ 2,500	\$ 15,000	\$ 2,500	
	Wave Traps	2	EA	\$ -	\$ -		\$ 5,000	\$ 2,500	
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
5.2j	Station Service Transformers	0	LA	7	· -	7	٠ -	,	-
3.2									
5.3	115kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -		\$ -	\$ 5,500	
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ 5,500	\$ -
	CT'S	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
5.3e	CCVT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arresters	0	EA	\$ -	\$ -		\$ -	\$ 1,500	
	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ 1,500	\$ -
	Station Service Transformers	0	EA	\$ -	\$ -		\$ -	š -	\$ -
	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.5,		Ů							
TOTAL - SMALL	L EQUIPTMENT / MATERIALS				\$ -		\$ 59,500		\$ 59,500
	OUSE / PANELS / GENERATOR				-		- 33,300		55,500
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	125VDC Batteries	0		\$ -	'		\$ -		\$ -
	Control Cables	0		\$ -	\$ -		\$ -	· .	\$ -
	SCADA and Communications	0		\$ -			\$ -		\$ -
	Low Voltage AC Distribution	0		\$ -	\$ -		\$ -		\$ -
	DC Distribution System	0		\$ -			\$ -		\$ -
	Security	0		\$ -	\$ -		\$ -		\$ -
	Fire Alarm	0		\$ -	\$ -		\$ -		\$ -
	Generator	0		\$ -	\$ -		\$ -		\$ -
0.10	- Constitution	0		· ·	1	¥ -	· ·	¥	-
TOTAL - CONT	L ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS					-		-		-
ITIISC IT LIVIS									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	1	L.S.	\$ -	\$ -	\$ 18,937.50	\$ 18,938	\$ 18,938	\$ 18,938
7.3	Strain Bus, Connectors & Insulators	1	L.S.	\$ -	\$ -	\$ 19,675.00	\$ 19,675	\$ 19,675	\$ 19,675
7.4	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MIS	CITEMS				\$ -		\$ 38,613		\$ 38,613
K. Porte	r Substation - Removal				\$ -		\$ 474,313		\$ 474,313
8. MOB/DEM	IOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 11,858	\$ 11,858	\$ 11,858	\$ 11,858
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 22,800	\$ 22,800	\$ 22,800	\$ 22,800
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
8.4	Site Accommodation, Facilities, Storage	1.0	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Engineering								
8.5	Design Engineering	1.0	LS	\$ -	\$ -	\$ 37,945	\$ 37,945	\$ 37,945	\$ 37,945
8.6	LiDAR		Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 3,320	\$ -	\$ 3,320	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 11,858	\$ -	\$ 11,858	\$ -
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 1,423	\$ 1,423	\$ 1,423	\$ 1,423
8.13	Real Estate Costs (New)		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1.0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits		LS		\$ -	\$ 474	\$ -	\$ 474	\$ -
	S/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 83,512		\$ 83,512

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K. SS Porter-Removal

L. Interconnection Edic Station

Estimate Revision: 5 Total: \$ 2,122,073

NG & NY Transco - TO	018 - (Segment A				
		Supply	lr	nstallation	Total
L. Interconnection Edic Station					
1. CLEARING & ACCESS	\$	-	\$	367,850	\$ 367,850
2. FOUNDATIONS	\$	168,366	\$	170,169	\$ 338,536
3. STRUCTURES	\$	501,469	\$	321,821	\$ 823,289
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	160,000	\$	94,400	\$ 254,400
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	66,387	\$	271,611	\$ 337,998
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$ -
SUBTOTAL:	\$	896,222	\$	1,225,851	\$ 2,122,073
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$ -
TOTAL:	\$	896,222	\$	1,225,851	\$ 2,122,073

escri	pti	on	of	w	or	k:	

1.2 Clearing the ROW- Light (mowing)	TOTAL	Total Unit Rate	Labor & Equipment Cost	Labor & Equipment Supply Rate	Material Supply Cost	ate	Material Supply Rate	Unit of Measure	Estimated Quantity	Item Description	Item
1.1 Clearing the ROW - Heavy (moving & clearing)										onnection Edic Station	L. Interc
1.2 Clearing the ROW - Light (mowing)										& ACCESS	1. CLEARING 8
1.3 Access Road	0 \$ -	\$ 15,000	\$ -	\$ 15,000	-	- \$	\$ -	Acre	-	Clearing the ROW - Heavy (mowing & clearing)	1.1
1.4 Sit Fence	0 \$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000	-	- \$	\$ -	Acre	2.0	Clearing the ROW - Light (mowing)	1.2
1.5 Matting - Access and ROW	5 \$ -			\$ 45	-	- \$	\$ -	LF	-	Access Road	1.3
1.6 Matting 1 Montk Area 30.00 LF \$ \$ \$ \$ \$ \$ \$ \$ \$	4 \$ 14,000	\$ 4	\$ 14,000	\$ 4	-	- \$	\$ -	LF	3,500.0	Silt Fence	1.4
1.7 Show Removal	0 \$ 245,000	\$ 70	\$ 245,000	\$ 70	-	- \$	\$ -	LF	3,500.0	Matting - Access and ROW	1.5
1.8 SOW Restoration	0 \$ 21,000		\$ 21,000		-	- \$		LF	300.0	Matting - To Work Area	1.6
1.9 Work Pad's 20,000.0 SF S S S S S S S S	0 \$ -	\$ 516,800	\$ -	\$ 516,800	-	- \$	\$ -	LS	-	Snow Removal	1.7
1.10 Restoration for Work Pad areas 4,000.0 SF S	0 \$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000	-	- \$	\$ -	Mile	0.5	ROW Restoration	1.8
1.11 Temporary Access Bridge - EA S - S 20,035 S - S 20,005 S 20	4 \$ 70,400	\$ 4	\$ 70,400	\$ 4	-	- \$	\$ -	SF	20,000.0	Work Pads	1.9
1.12 Air Bridge	0 \$ 600	\$ 0	\$ 600	\$ 0.2	-	- \$	\$ -	SF	4,000.0	Restoration for Work Pad areas	1.10
1.12 Air Bridge	5 \$ -	\$ 20,035	\$ -	\$ 20,035	-	- \$	\$ -	EA	-	Temporary Access Bridge	1.11
1.13 Stabilized Construction Entrance	5 \$ -	\$ 14,445	\$ -	\$ 14,445	-	- s	\$ -	EA	_		1.12
1.14 Maintenance and Protection of Traffic on Public Roads - EA S - S 4,130 S - S 4,131 1.15 Gates - EA S 2,000 S - S 2,500 S - S 4,200 1.16 Culverts / Misc. Access - EA S 750 S - S 2,500 S - S 2,500 1.17 Concrete Washout Station 1 EA S - S - S 1,250 S 1,850 1.18 S S 1,850 S 1,850 1.19 S S S S S S 1.19 S S S S S S 1.20 Crushed Rock 0 CY S 27 S - S 75 S - S 1.20 Crushed Rock 0 CY S 27 S - S 75 S S 2.70 TOTAL - CLEARING & ACCESS S 41,774 S 125,322 S 83,106 2.1 Foundation – Drilled Pier – 8"X 27" S S 44,847 S 44,847 S 89,215 2.2 Foundation – Drilled Pier – 8"X 29" S S S S S 2.3 Rock Excavation Adder CY S S S S S S 2.4 S S S S S S S 2.5 S S S S S S S 2.8 S S S S S S S S 2.9 S S S S S S S 2.9 S S S S S S S 3.00 S S S S S 4.132 S 123,995 S 41,774 S 125,322 S 83,106 3.10 S S S S S S S 3.10 S S S S S 3.10 S S S S S S 3.10 S S S S 3.10 S S S S S 3.10 S S S S S 3.10 S S S S 3.10 S S S S 3.10 S S S	0 \$ -	\$ 4,580	\$ -	\$ 4,580	-	- \$	\$ -	EA	-		
1.15 Gates			\$ -	\$ 4,130	-	- \$	\$ -	EA	-	Maintenance and Protection of Traffic on Public Roads	
1.16 Culverts / Misc. Access - EA S 750 S - S 1,250 S S 2,000					-	000 \$		EA	_	Gates	
1.17 Concrete Washout Station 1 EA 5 - 5 - 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850									-		
1.18									1		
1.19	\$ -	7 -,551					*				
1.20 Crushed Rock	\$ -										
TOTAL - CLEARING & ACCESS \$	2 \$ -	\$ 102	т	\$ 75			\$ 27	CY	0	Crushed Rock	
2.1 Foundation - Drilled Pier - 8'X 27' 3 EA \$ 41,332 \$ 123,995 \$ 41,774 \$ 125,322 \$ 83,106	\$ 367,850		\$ 367,850		-	\$					
2.2 Foundation – Drilled Pier – 8'X 29' 1 EA \$ 44,372 \$ 44,372 \$ 44,847 \$ 89,215										DNS	2. FOUNDATION
2.3 Rock Excavation Adder - CY \$ - \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2,000 \$ - \$ 2	6 \$ 249,317	\$ 83,106	\$ 125,322	\$ 41,774	123,995	332 \$	\$ 41,332	EA	3	Foundation – Drilled Pier – 8'X 27'	2.1
2.4 2.5 2.6 2.7 2.8 2.9	9 \$ 89,219	\$ 89,219	\$ 44,847	\$ 44,847	44,372	372 \$	\$ 44,372	EA	1	Foundation – Drilled Pier – 8'X 29'	2.2
2.5 2.6 2.7 2.8 2.9	0 \$ -	\$ 2,000	\$ -	\$ 2,000		- \$	\$ -	CY	-	Rock Excavation Adder	2.3
2.6 2.7 2.8 2.9											2.4
2.7 2.8 2.9											
2.8 2.9											
2.9											
											2.10
2.11											
2.12											
2.13											
2.14											2.14

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply F	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.15											
TOTAL - FOUN						\$ 168,366		\$ 170,169		\$	338,536
3. STRUCTURE									<u> </u>		
3.1	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) – 105'	3	Structure			\$ 296,648	\$ 59,330	\$ 177,989	\$ 158,212		474,636
3.2	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure		797		\$ 121,678		\$ 324,475		324,475
3.3	Install Grounding and Grounding Accessories	4	Pole	\$	506		\$ 5,539	\$ 22,154 \$ -	\$ 6,045		24,178
3.4					\rightarrow	\$ -		ş -		\$	-
3.6						\$ -		\$ -		Ś	
3.7					\rightarrow	\$ -		\$ -		\$	
3.8						\$ -		\$ -		\$	_
3.9						\$ -		\$ -		\$	-
3.10						\$ -		\$ -		\$	-
3.11						\$ -		\$ -		\$	-
3.12						\$ -		\$ -		\$	-
3.13						\$ -		\$ -		\$	-
3.14						\$ -		\$ -		\$	-
3.15				1		\$ -		\$ -		Ś	
	TUDEC					•				*	-
TOTAL - STRUC						\$ 501,469		\$ 321,821		\$	823,289
4. CONDUCTO	R, SHIELDWIRE, OPGW 345kV - (1) 954kcmil 54/7 ACSS "Cardinal"		LF	\$	1.90	ė	\$ 5.00	\$ -	\$ 6.90	\$	
4.1	(1) OPGW 36 Fiber AC-33/38/571	-	LF LF			\$ - \$ -	\$ 5.00		\$ 6.35		-
4.3	(1) 3/8" EHS7 Steel	-	LF		0.47		\$ 5.00	\$ -	\$ 5.47		
4.5	Remove Existing Cable From Existing Structures		Mile	Ś		\$ -	\$ 30,000		\$ 30,000.00	Ś	_
4.6	Remove Existing OPGW Cable	-	Mile	Ś		\$ -	\$ 12,000		\$ 12,000.00	_	-
4.7	Remove Existing EH7		Mile	\$			\$ 12,000	\$ -	\$ 12,000.00		-
4.8	-										
4.9		٠									
4.10	Rider Poles - Relocated	-	Set	\$		\$ -	\$ 3,500		\$ 3,500.00		-
4.11	Rider Poles	-	EA	\$ 1	,750		\$ 3,500		\$ 5,250.00		-
	JCTOR, SHIELDWIRE, OPGW:					\$ -		\$ -		\$	-
	FITTINGS, HARDWARE				000	A	Å 700		A 2.520		
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)		Assembly			\$ - \$ -	\$ 720 \$ 560		\$ 2,520 \$ 1,460		-
5.3	115kV Tangent (1-Group of 9-Bells Each Assembly) 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly Assembly		-	\$ 108,000	\$ 720		\$ 2,520		151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	00	Assembly		$\overline{}$	\$ -	\$ 560		\$ 1,460		-
5.5	OPGW Assembly - Tangent		Assembly		200		\$ 150		\$ 350	_	_
5.6	OPGW Assembly - Angle / DE	4	Assembly		_	\$ 1,000	\$ 150		\$ 400		1,600
5.7	OHSW Assembly - Angle / DE	4	Assembly		250		\$ 150				1,600
5.8	OPGW Splice Boxes	-	Set	\$ 1,	746	\$ -	\$ 2,274	\$ -	\$ 4,020	\$	-
5.9	OPGW Splice & Test	٠	EA	\$ 2,	520	\$ -	\$ 2,520	\$ -	\$ 5,040	\$	-
5.10	Spacer - Conductor		EA	\$		\$ -	\$ 35		\$ 85		-
5.11	Vibration Dampers - Conductor	-	EA	\$	35	\$ -	\$ 35	\$ -	\$ 70	\$	-
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$	-
5.13	Guys, Anchors, and Accessories		EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	Ś	_
5.14	Misc. materials (Signs and Markers)	-	Mile	1 '	\rightarrow	\$ -	\$ 1,006	\$ -	\$ 1,776		
5.14	INISC. Hateriais (Signs and Iviainers)	-	iville	1,	_	\$ -	1,006 پ	\$ -	1,//6	\$	-
5.16					\dashv	-		-		,	<u>-</u>
5.17						\$ -		\$ -		\$	
5.18						\$ -		\$ -		\$	-
5.19	Interconnection Arrangements	1	EA	\$ 50,	-	\$ 50,000	\$ 50,000	\$ 50,000	\$ 100,000	\$	100,000
5.20						\$ -		\$ -		\$	-
TOTAL - INSUL	ATOR, FITTINGS, HARDWARE					\$ 160,000		\$ 94,400		\$	254,400
L. Interce	onnection Edic Station					\$ 829,835		\$ 954,240		\$	1,784,075
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					222,233					,,
O. IVIOB/DEIVIC	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	Ś	17,841
0.1	Project Management, Material Handling & Amenities	1		1	_	· -	7 17,041	7 17,041	7 17,041	,	17,041
				1							
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 85,760	\$ 85,760	\$ 85,760	\$	85,760

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	.	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
	Engineering									
6.5	Design Engineering	1	LS	\$.	. :	\$ -	\$ 89,204	\$ 89,204	\$ 89,204	\$ 89,204
6.6	LiDAR	-	LS	\$ -	.	\$ -	\$ 5,352	\$ -	\$ 5,352	\$ -
6.7	Geotech	1	Location	\$.	. !	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$.	. :	\$ -	\$ 12,489	\$ 12,489	\$ 12,489	\$ 12,489
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$.	.	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$.	- !	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$.	.	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$.	- !	\$ -	\$ 5,352	\$ 5,352	\$ 5,352	\$ 5,352
6.13	Real Estate Costs (New ROW)	1	LS	\$.	.	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$.	. !	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$.	.	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$.	- !	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$.	.	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 66,3	87	\$ 66,387	\$ -	\$ -	\$ 66,387	\$ 66,387
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 1,784		\$ 1,784	\$ 1,784
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 66,387		\$ 271,611		\$ 337,998

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M. Interconnection New Scotland Station

Estimate Revision: 5 Total: \$ 3,101,204

NG & NY Transco	- T018 - (Segment A	4)				
		Supply		Installation		Total
M. Interconnection New Scotland Station						
1. CLEARING & ACCESS	\$	-	\$	367,850	\$	367,85
2. FOUNDATIONS	\$	365,657	\$	473,093	\$	838,74
3. STRUCTURES	\$	655,465	\$	445,628	\$	1,101,092
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,555	\$	26,100	\$	29,65
5. INSULATORS, FITTINGS, HARDWARE	\$	161,130	\$	95,795	\$	256,92
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	94,864	\$	412,068	\$	506,93
CONTRACTOR MARK-UP (OH&P)	\$		\$		\$	-
SUBTOTAL:	\$	1,280,670	\$	1,820,533	\$	3,101,204
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	1.280.670	Ś	1.820.533	Ś	3.101.20

Descr	iption	ot v	vork:

Item	Item Description	Estimated Quantity	Unit of Measure	Materi	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
M. Inter	connection New Scotland Station										
1. CLEARING 8	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$	10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45	\$ -	\$ 45	\$	-
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$	14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000	\$ 70	\$	245,000
1.6	Matting - To Work Area	300.0	LF	\$	-	\$ -	\$ 70	\$ 21,000	\$ 70	\$	21,000
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800	\$ -	\$ 516,800	\$	-
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$	5,000
1.9	Work Pads	20,000.0	SF	\$	-	\$ -	\$ 4	\$ 70,400	\$ 4	\$	70,400
1.10	Restoration for Work Pad areas	4,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 600	\$ 0	\$	600
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$	-
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$	-
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$	-
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$		\$ -		\$ -	\$ 4,130	\$	-
1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500		\$ 4,500	\$	-
1.16	Culverts / Misc. Access	-	EA	\$	750		\$ 1,250	\$ -	\$ 2,000	Ś	-
1.17	Concrete Washout Station	1	EA	\$		\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$	1,850
1.18				1		\$ -	,	\$ -		s	-
1.19						\$ -		\$ -		\$	-
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$	-
TOTAL - CLEAF	ING & ACCESS					\$ -		\$ 367,850		\$	367,850
2. FOUNDATIO	INS										
2.1	Foundation – Drilled Pier – 8'X 50'	3	EA	\$	76,500	\$ 229,501	\$ 77,320	\$ 231,959	\$ 153,820	\$	461,459
2.2	Foundation – Drilled Pier – 8'X 89'	1	EA	\$	136,156	\$ 136,156	\$ 137,614	\$ 137,614	\$ 273,770	\$	273,770
2.3	Rock Excavation Adder	51.8	CY	\$	-	\$ -	\$ 2,000	\$ 103,520	\$ 2,000	\$	103,520
2.4											
2.5											
2.6											
2.7											
2.8											
2.9											
2.10											
2.11											
2.12				-							\longrightarrow
2.13				1						l	

Item	Item Description	Estimated Quantity	Unit of Measure	Material S	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	-	TOTAL
2.14											
2.15											
TOTAL - FOUN						\$ 365,657		\$ 473,093		\$	838,749
3. STRUCTURE		2	Characteria	6	470.026	ć 524.077	ć 100.04F	\$ 320,446	\$ 284.841		054 533
3.1	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115' 1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	3	Structure Structure	\$	178,026 116,328	\$ 534,077 \$ 116,328			T,		854,522 186,125
3.3	Install Grounding and Grounding Accessories	10	Structure	Ś		\$ 5,060	\$ 5,539		\$ 6,045	Ś	60,445
3.4	install drounding and drounding Accessories	10	Structure	+		\$ -	3,333	\$ 55,565	9 0,043		- 00,445
3.5						•				i	
3.6						\$ -		\$ -		I	
3.7						\$ -		\$ -			
3.8						\$ -		\$ -			
3.9						\$ -		\$ -			
3.10						\$ -		\$ -			
3.11						\$ -		\$ -			
3.12				1		\$ - \$ -		\$ - \$ -			
				1		•		1			
3.14						\$ -		\$ -			
3.15						\$ -		\$ -		l .	
TOTAL - STRUC						\$ 655,465		\$ 445,628		\$	1,101,092
	R, SHIELDWIRE, OPGW										
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	1,500	LF	\$		\$ 2,850	\$ 5.00	, , , , , , , , , , , , , , , , , , , ,	\$ 6.90		10,350
4.2	(1) OPGW 36 Fiber AC-33/38/571	- 4.500	LF	\$		\$ -	\$ 5.00		\$ 6.35		-
4.3	(1) 3/8" EHS7 Steel	1,500	LF Mile	\$	0.47	\$ 705 \$ -	\$ 5.00 \$ 30,000		\$ 5.47 \$ 30,000.00		8,205
4.5	Remove Existing 345kV Cable From Existing Structures Remove Existing OPGW Cable	0.3	Mile	\$		\$ -	\$ 30,000	7 .,	\$ 30,000.00		7,500
4.6	Remove Existing Orday Cable Remove Existing EH7	0.3	Mile	\$		\$ -	\$ 12,000	\$ 3,600			3,600
4.8	Nemove Existing Em	0.5	IVIIIC	7		-	7 12,000	3,000	3 12,000.00	, 	3,000
4.9											
4.10	Rider Poles - Relocated	-	Set	\$	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$	-
4.11	Rider Poles	-	EA	\$	1,750		\$ 3,500		\$ 5,250.00	\$	-
	UCTOR, SHIELDWIRE, OPGW:					\$ 3,555		\$ 26,100		\$	29,655
	, FITTINGS, HARDWARE										
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$,	\$ -	\$ 720		\$ 2,520		
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly) 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	- 60	Assembly	\$		\$ - \$ 108,000	\$ 560 \$ 720		\$ 1,460 \$ 2,520		151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 18-bells Each Assembly)		Assembly Assembly	\$		\$ 108,000	\$ 720		\$ 2,520 \$ 1,460		151,200
5.5	OPGW Assembly - Tangent	-	Assembly	\$		\$ -	\$ 150		\$ 350	\$	
5.6	OPGW Assembly - Angle / DE	-	Assembly	\$		\$ -	\$ 150		\$ 400	Ś	_
5.7	OHSW Assembly - Angle / DE	4	Assembly	\$		\$ 1,000			\$ 400	\$	1,600
5.8	OPGW Splice Boxes	-	Set	\$	1,746		\$ 2,274		\$ 4,020		-
5.9	OPGW Splice & Test	-	EA	\$	2,520		\$ 2,520		\$ 5,040		-
5.10	Spacer - Conductor	9	EA	\$	50				\$ 85		765
5.11	Vibration Dampers - Conductor	48	EA	\$	35				\$ 70		3,360
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$	-
5.13	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.14	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$	-
5.15	, ,			1		\$ -	,,,,,	\$ -	,	\$	-
5.16	Interconnection Arrangements	1	EA	\$	50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 100,000	\$	100,000
5.17						\$ -		\$ -		\$	-
5.18						\$ -		\$ -		\$	-
5.19				1		\$ -		\$ -		\$	-
5.20	 ATOR, FITTINGS, HARDWARE					\$ - \$ 161,130		\$ - \$ 95,795		\$	256,925
										¢	
	connection New Scotland Station					\$ 1,185,806		\$ 1,408,465		\$	2,594,271
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization										
1		1					1	1			
6.1	Mob / Demob	1	LS	5	-	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	Ś	25,943

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	te N	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 124,707	\$ 124,707	\$ 124,707	\$ 124,707
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 129,714	\$ 129,714	\$ 129,714	\$ 129,714
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$		\$ 18,160	\$ 18,160	\$ 18,160	\$ 18,160
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$		\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 94,86	54 \$	94,864	\$ -	\$ -	\$ 94,864	\$ 94,864
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 2,594	\$ 2,594	\$ 2,594	\$ 2,594
TOTAL - MOE	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	94,864		\$ 412,068		\$ 506,933

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M. In. New Scotland SS

N. Interconnection Rotterdam Station

Estimate Revision: 5 Total: \$ 4,781,500

NG & NY Transco - T018 - (Se	gment A)		
		Supply	Installation	Total
N. Interconnection Rotterdam Station				
1. CLEARING & ACCESS	\$	-	\$ 1,233,050	\$ 1,233,050
2. FOUNDATIONS	\$	192,145	\$ 325,963	\$ 518,108
3. STRUCTURES	\$	546,722	\$ 995,362	\$ 1,542,084
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	65,923	\$ 437,250	\$ 503,173
5. INSULATORS, FITTINGS, HARDWARE	\$	165,730	\$ 118,480	\$ 284,210
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	77,642	\$ 623,234	\$ 700,876
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,048,161	\$ 3,733,339	\$ 4,781,500
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:		1,048,161	\$ 3,733,339	4,781,500

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Inter	connection Rotterdam Station								
1. CLEARING 8									
1.1	Clearing the ROW - Heavy (mowing & clearing)	7.0	Acre	\$ -	\$ -	\$ 15,000	\$ 105,000	\$ 15,000	\$ 105,000
1.2	Clearing the ROW - Light (mowing)	5.0	Acre	\$ -	\$ -	\$ 5,000		· ·	
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45			\$ -
1.4	Silt Fence	4,800.0	LF	\$ -	\$ -	\$ 4			\$ 19,200
1.5	Matting - Access and ROW	4,800.0	LF	\$ -	\$ -	7			\$ 336,000
1.6	Matting - To Work Area	2,400.0	LF	\$ -	\$ -	\$ 70			\$ 168,000
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	
1.8	ROW Restoration	1.0	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	160,000.0	SF SF	\$ - \$ -	\$ - \$ -	\$ 4	1,		\$ 563,200
1.10 1.11	Restoration for Work Pad areas	32,000.0	EA EA	\$ - \$ -	\$ -	\$ 0.2 \$ 20,035	\$ 4,800 \$ -	\$ 20,035	\$ 4,800 \$ -
1.11	Temporary Access Bridge Air Bridge	-	EA	\$ -	\$ -	\$ 20,035	T	\$ 20,035	<u> </u>
1.12	Stabilized Construction Entrance	-	EA	\$ -	\$ -			\$ 14,445	
1.13	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	
1.14	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	-	EA	\$ 750		\$ 1,250		\$ 2,000	
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850			
1.18	Concrete Washout Station	-	LA.	,	\$ -	7 1,050	\$ -	7 1,050	\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	СҮ	\$ 27	•	\$ 75		\$ 102	
	RING & ACCESS				\$ -		\$ 1,233,050		\$ 1,233,050
2. FOUNDATIO					4	4	4		4
2.1	10' ED Rock BF	6		\$ 358					
2.2	15' ED Rock BF	18		\$ 536			\$ 96,525	· ·	
2.3	20' ED Rock BF	4	EA	\$ 715				·	
2.4	Foundation – Drilled Pier – 8'X 29'	4	EA	\$ 44,372	\$ 177,487	\$ 44,847	\$ 179,388	\$ 89,219	\$ 356,875
2.5	Rock Excavation Adder	-	CY	\$ -	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ -		\$ -
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	/ Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.13						\$ -		\$ -		\$ -
2.14						\$ -		\$ -		\$ -
2.15 TOTAL - FOUN	IDATIONS				\rightarrow	\$ - \$ 192,145		\$ - \$ 325,963		\$ - \$ 518,108
3. STRUCTURE						3 192,143		\$ 323,303		3 316,106
3.1	15kV 3-CKT TANGENT DIST WOOD POLE	3	Pole	\$	3,500	\$ 10,500	\$ 3,600	\$ 10,800	\$ 7,100	\$ 21,300
3.2	15Kv 3-CKT MA DIST WOOD POLE	1	Pole	\$	3,500	\$ 3,500	\$ 3,600	\$ 3,600		\$ 7,100
3.3	15kV 3-CKT DE - WOOD POLE	2	Pole		3,500	\$ 7,000	\$ 3,600	\$ 7,200		\$ 14,200
3.4	115kV 1-CKT TANGENT - WOOD POLE	5	Pole		4,500	\$ 22,500	\$ 4,400	\$ 22,000	\$ 8,900	\$ 44,500
3.5	115kV 1-CKT MA - WOOD POLE 115kV 1-CKT DE - WOOD POLE	2 11	Pole Pole		4,500 5,500	\$ 9,000 \$ 60,500	\$ 4,400 \$ 5,000	\$ 8,800 \$ 55,000		\$ 17,800 \$ 115,500
3.7	115kV 2-CKT TANGENT - WOOD POLE	4	Pole		5,500	\$ 22,000	\$ 5,000	\$ 35,000		\$ 113,300
3.8	115kV 2-CKT DE - STEEL POLE	4	Pole	<u> </u>	8,883	\$ 395,530		\$ 395,530		\$ 791,060
3.9	Remove Existing Structure	24	EA		,,,,,,,	\$ -	\$ 12,300	\$ 295,200		\$ 295,200
3.10						\$ -		\$ -		\$ -
3.11						\$ -		\$ -		\$ -
3.12	Install Grounding and Grounding Accessories	32	Structure	\$	506	\$ 16,192 \$ -	\$ 5,539	\$ 177,232	\$ 6,045	\$ 193,424
3.13						*		\$ -		\$ -
3.14 3.15						\$ - \$ -		\$ - \$ -		\$ - \$ -
TOTAL - STRU	CTURES				_	\$ 546,722		\$ 995,362		\$ 1,542,084
	DR, SHIELDWIRE, OPGW					ŷ 310,722		333,302		2,3 12,00 1
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	23,400	LF	\$	1.90	\$ 44,460	\$ 5.00	\$ 117,000	\$ 6.90	\$ 161,460
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35	\$ -	\$ 5.00	\$ -		\$ -
4.3	(1) 3/8" EHS7 Steel	7,800	LF	\$	0.47	\$ 3,666	\$ 5.00	\$ 39,000		\$ 42,666
4.5	Remove Existing Cable	6.6	Mile	\$	-	\$ -	\$ 30,000	\$ 197,700		\$ 197,700
4.6	Remove Existing EH7 15kV - (1) 477kcmil 26/7 ACSR "Hawk"	2.2 9,630	Mile LF	\$	1.62	\$ - \$ 15,601	\$ 12,000 \$ 5.00	\$ 26,400 \$ 48,150		\$ 26,400 \$ 63,751
4.7	15kV - (1) 336kcmil 26/7 ACSR "Linnet"	1,800	LF	\$	1.22	\$ 2,196	\$ 5.00	\$ 9,000		\$ 11,196
4.9	15KV (1) 55KKIIII 20) 7 RESIL EIIII EE	-	- G	7	1.22	2,130	ŷ 5.00	3,000	ÿ 0.22	y 11,130
4.10	Rider Poles - Relocated	-	Set	\$	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$	1,750	\$ -	\$ 3,500		\$ 5,250.00	\$ -
	UCTOR, SHIELDWIRE, OPGW:					\$ 65,923		\$ 437,250		\$ 503,173
	R, FITTINGS, HARDWARE	22			1.000	4 22.000	Å 500	40.400	4.500	A
5.1	115kV Tangent (1-Group of 9-Bells Each Assembly) 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	33	Assembly		1,000	\$ 33,000 \$ 66,000	\$ 560 \$ 560	\$ 18,480 \$ 36,960		\$ 51,480 \$ 102,960
5.3	15kV Tangent	12	Assembly Assembly	\$	100	\$ 1,200				\$ 2,100
5.4	15kV Dead-end & Angle Insulators	18	Assembly	\$	100	\$ 1,800	\$ 75			\$ 3,150
5.5	Neutral, Distribution, Tangent	4	Assembly	\$	100	\$ 400	\$ 75			\$ 700
5.6	Neutral, Distribution, DE/Side	2	Assembly	\$	100	\$ 200	\$ 75	\$ 150	\$ 175	\$ 350
5.7	Jumper, DE/Angle, 3PH	4	Assembly	\$	100	\$ 400	\$ 75			\$ 700
5.8	OPGW Assembly - Tangent	2	Assembly	\$	200	\$ 400	\$ 150			\$ 700
5.9	OSHW Assembly - Tangent	11	Assembly	\$	250	\$ 2,750	\$ 150	\$ 1,650		\$ 4,400
5.10	OHSW Assembly - Angle / DE OPGW Splice Boxes	38	Assembly	\$	250 1,746	\$ 9,500 \$ -	\$ 150 \$ 2,274	\$ 5,700 \$ -	 	\$ 15,200 \$ -
				l .						-
5.12 5.13	OPGW Splice & Test Spacer - Conductor	-	EA EA	\$	2,520 50	\$ - \$ -	\$ 2,520 \$ 35	\$ -	\$ 5,040 \$ 85	\$ - \$ -
5.14	Vibration Dampers - Conductor	-	EA	\$	35	\$ -	\$ 35			\$ -
5.15	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35			\$ -
5.16	Guys, Anchors, and Accessories	14.0	EA	\$	720	\$ 10,080	\$ 885	\$ 12,390		\$ 22,470
5.17	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$ -
5.18				ļ		\$ -	4	\$ -		\$ -
5.19	Interconnection Arrangements	8	EA	\$	5,000	\$ 40,000	\$ 5,000			\$ 80,000
5.20 5.21				1		\$ - \$ -		\$ - \$ -		\$ - \$ -
5.22				1	_	\$ -		\$ -		\$ -
5.23				1		\$ -		\$ -		\$ -
	LATOR, FITTINGS, HARDWARE				\rightarrow	\$ 165,730		\$ 118,480		\$ 284,210
	connection Rotterdam Station					\$ 970,519		\$ 3,110,105		\$ 4,080,624
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization			1						
										Page 55 of 57

Item	Item Description	Estimated Quantity	Unit of Measure	Material Suppl	y Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 40,806	\$ 40,806	\$ 40,806	\$ 40,806
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 196,156	\$ 196,156	\$ 196,156	\$ 196,156
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 40,806	\$ 40,806	\$ 40,806	\$ 40,806
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 40,806	\$ 40,806	\$ 40,806	\$ 40,806
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 204,031	\$ 204,031	\$ 204,031	\$ 204,031
6.6	Lidar	1	LS	\$	-	\$ -	\$ 12,242	\$ 12,242	\$ 12,242	\$ 12,242
6.7	Geotech	1	Location	\$	-	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 28,564	\$ 28,564	\$ 28,564	\$ 28,564
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 12,242	\$ 12,242	\$ 12,242	\$ 12,242
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 7	77,642	\$ 77,642	\$ -	\$ -	\$ 77,642	\$ 77,642
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 4,081	\$ 4,081	\$ 4,081	\$ 4,081
TOTAL - MOI	B/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 77,642		\$ 623,234		\$ 700,876

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ESTIMATE ASSUMPTIONS & CLARIFICATIONS

- 1 Cost Estimate is based on 2017 rates.
- Construction schedule is in accordance with proposed schedule we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
- We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
- 4 All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
- 5 We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type.
- Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
- Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
- 8 |Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
- 9 A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
- 10 We have assumed that all project details provided are accurate unless noted otherwise.
- 11 Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
- 12 A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
- A contractor allowance of 4.121% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
- 14 An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
- 15 A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
- An allowance of 5% for transmission design and engineering has been included in the total section.
- 17 An allowance of 8% for substation design and engineering has been included in the total section.
- An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
- An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
- 20 An allowance of 3.75% for substation testing and commissioning has been included in the total section.
- 21 An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
- New York state sales tax of 8% is included in all material pricing.
- 23 An allowance of 1.5% for insurance is included in the DPS sheet.



		NextEra Energy (T021)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$55,279
	1.2	Foundations	\$18,318
	1.3	Structures	\$74,701
	1.4	Conductor, Shiedwire and OPGW	\$38,661
	1.5	Insulators, Fitting and Hardwares	\$18,280
		Subtotal (1)	\$205,239
	2	Substations	
st	2.1	Rotterdam Substation	\$850
t C	2.2	Edic Substation	\$2,153
Direct Cost	2.3	Princetown Substation	\$40,296
	2.4	New Scotland Substation	\$6,883
	2.5	Porter Substation	\$546
	2.6	Knickerbocker Substation	\$0
	2.7	Marcy Substation	\$0
	2.8	Substation Interconnections	\$4,378
		Subtotal (2)	\$55,107
		Total (1+2)	\$260,346
		Contractors Mark-up (15% of Total 1+2)	\$39,052
		Total Direct Cost (A)	\$299,398
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,603
ا پر ا	3.2	Project Management, Material Handling & Amenities	\$18,440
Cos	3.3	Engineering	\$17,327
Indirect Cost	3.4	Testing & Commissioning	\$1,435
Indi	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$15,672
	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,865
		Total Indirect Cost (3)	\$72,262
		Subtotal Project Cost (B=A+3) 2017 \$	\$371,660
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project	\$0
	4.2	NUF identified during Evaluation	\$0
		Subtotal NUF Cost (C)	\$0
		Total Project Cost (B+C) 2017 \$	\$371,660
		Total Project Cost 2018 \$	\$382,810

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Estimate Revision: 5

	NextEra - T021 Enterprise Line - (Segment A) - Direct Costs		Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Edic to Princetown	\$	142,045,942
Direct Labor, Material & Equipment Costs	B. Transmission Line Princetown to Rotterdam	\$	22,954,338
Direct Labor, Material & Equipment Costs	C. Transmission Line Princetown to New Scotland	\$	40,238,473
Direct Labor, Material & Equipment Costs	D. Princetown Substation - Install	\$	40,296,444
Direct Labor, Material & Equipment Costs	F. Edic Substation - Install	\$	2,117,185
Direct Labor, Material & Equipment Costs	G. Edic Substation - Removal	\$	35,950
Direct Labor, Material & Equipment Costs	H. New Scotland Substation - Install	\$	6,740,673
Direct Labor, Material & Equipment Costs	I. New Scotland Substation - Removal	\$	142,200
Direct Labor, Material & Equipment Costs	J. Porter Substation - Install	\$	71,912
Direct Labor, Material & Equipment Costs	K. Porter Substation - Removal	\$	474,313
Direct Labor, Material & Equipment Costs	L. Interconnection Edic Station	\$	1,784,075
Direct Labor, Material & Equipment Costs	M. Interconnection New Scotland Station	\$	2,594,271
Direct Labor, Material & Equipment Costs	N. Rotterdam Subtation - Install	\$	850,000
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	-
	SU	BTOTAL: \$	260,345,776
	CONTRACTOR MARK-UI	(OH&P) \$	39,051,866
	CONTINGENCY ON ENTIRE	PROJECT \$	-
	TOTAL	DIRECT: \$	299,397,642

	NextEra - T021 Enterprise Line - (Segment A) - Indirect Costs		Total Each Segment
Indirect Costs	A. Transmission Line Edic to Princetown	\$	37,373,534
Indirect Costs	B. Transmission Line Princetown to Rotterdam	\$	4,659,697
Indirect Costs	C. Transmission Line Princetown to New Scotland	\$	8,472,452
Indirect Costs	D. Princetown Substation - Install	\$	10,527,866
Indirect Costs	F. Edic Substation - Install	\$	521,904
Indirect Costs	G. Edic Substation - Removal	\$	5,890
Indirect Costs	H. New Scotland Substation - Install	\$	1,643,663
Indirect Costs	I. New Scotland Substation - Removal	\$	26,852
Indirect Costs	J. Porter Substation - Install	\$	29,355
Indirect Costs	K. Porter Substation - Removal	\$	78,181
Indirect Costs	L. Interconnection Edic Station	\$	342,922
Indirect Costs	M. Interconnection New Scotland Station	\$	514,093
Indirect Costs	N. Interconnection Rotterdam Station	\$	201,306
Indirect Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Indirect Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	-
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitagation)	\$	7,864,674
	TOTA IN	NDIRECT: \$	72,262,388

TOTAL ESTIMATED COST: \$ 371,660,030

A. Transmission Line Edic to Princetown

Estimate Revision: 5 Total: \$ 179,419,477

NextEra - T021 Enterprise Line - (So	egme	nt A)		
		Supply	Installation	Total
A. Transmission Line Edic to Princetown				
1. CLEARING & ACCESS	\$	41,500	\$ 38,580,626	\$ 38,622,126
2. FOUNDATIONS	\$	1,198,049	\$ 9,147,920	\$ 10,345,968
3. STRUCTURES	\$	8,531,149	\$ 41,220,539	\$ 49,751,688
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	7,848,486	\$ 22,863,905	\$ 30,712,391
5. INSULATORS, FITTINGS, HARDWARE	\$	8,560,788	\$ 4,052,981	\$ 12,613,769
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	2,094,398	\$ 35,279,137	\$ 37,373,534
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	28,274,369	\$ 151,145,108	\$ 179,419,477
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	28,274,369	\$ 151,145,108	\$ 179,419,477

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Transr	mission Line Edic to Princetown								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	127.0	Acre		\$ -	\$ 5,000	\$ 635,000	\$ 5,000	\$ 635,000
1.3	Access Road	70,540.8	LF	\$ -	\$ -	\$ 45			
	Silt Fence	352,704.0	LF	\$ -	\$ -		\$ 1,410,816		
	Matting - Access and ROW	282,163.2	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	25,200.0	LF	\$ -	\$ -	\$ 70			
	Snow Removal	66.8	Mile	\$ -	\$ -	\$ 16,000	\$ 1,068,800		\$ 1,068,800
	ROW Restoration	66.8	Mile	\$ -	\$ -	\$ 10,000	\$ 668,000		\$ 668,000
	Work Pads	2,625,000.0	SF	\$ -	\$ -	\$ 4		\$ 4	
	Restoration for Work Pad areas	525,000.0	SF	\$ -	\$ -	\$ 0.15	1		
	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	
	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	
	Stabilized Construction Entrance	50	EA	\$ -	\$ -	\$ 4,580	\$ 229,000		
	Maintenance and Protection of Traffic on Public Roads	100	EA	\$ -	\$ -	\$ 4,130	\$ 413,000	\$ 4,130	
	Culverts / Misc. Access	10	EA	\$ 750		\$ 1,250	\$ 12,500	\$ 2,000	
	Gates	17	EA	\$ 2,000		\$ 2,500	\$ 42,500	\$ 4,500	
	Concrete Washout Station	50	EA	\$ -	\$ -	\$ 1,850	\$ 92,500	\$ 1,850	
TOTAL - CLEAR					\$ 41,500		\$ 38,580,626		\$ 38,622,126
2. FOUNDATIO									
	Direct Embed - 345KV S/C CONC DELTA TANGENT	472	EA	\$ 1,739			\$ 5,582,698	\$ 13,567	
	Direct Embed - 345KV S/C CONC GUYED DEADEND	21	EA	\$ 1,943			\$ 277,443	\$ 15,154	
	Direct Embed - 345KV S/C CONC RUNNING ANGLE	22	EA	\$ 2,072	\$ 45,587	\$ 14,090	\$ 309,990	\$ 16,163	\$ 355,577
	Drilled Pier - 345KV S/C STEEL DELTA TANGENT	5	EA	\$ 24,478	, , , , , , , , , , , , , , , , , , , ,	\$ 24,741	\$ 123,703	\$ 49,219	\$ 246,095
2.5	Drilled Pier - 345KV RUNNING ANGLE, STEEL	2	EA	\$ 32,128		\$ 32,473	\$ 64,945		\$ 129,202
2.6	Drilled Pier - 345KV SELF SUPPORT DEADEND, STEEL	3	EA	\$ 34,676	\$ 104,027	\$ 35,047	\$ 105,141	\$ 69,723	\$ 209,169
2.7	Rock Excavation Adder	1,342.0	CY	\$ -	\$ -	\$ 2,000	\$ 2,684,000	\$ 2,000	\$ 2,684,000
2.8									
2.9									
2.10									
2.11									
2.12									
2.13									
2.14									
TOTAL - FOUNI	DATIONS:				\$ 1,198,049		\$ 9,147,920		\$ 10,345,968
3. STRUCTURES					7 1,156,049		3,147,920		J 10,545,508
		470	Christian	ć 14.030	¢ 7.046.060	ć 47.0C4	¢ 22.620.070	ć C2.004	ć 20.696.020
	345KV S/C CONCRETE DELTA TANGENT	472	Structure	\$ 14,930 \$ 17,582			\$ 22,639,079		
3.2	345KV S/C CONCRETE GUYED DEADEND	21	Structure	\$ 17,582	\$ 369,222	\$ 60,144	\$ 1,263,021	\$ 77,726	\$ 1,632,243 Page 3 of 55

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
3.3	345KV S/C CONCRETE GUYED RUNNING ANGLE	22	Structure	\$ 17,880	\$ 393,360	\$ 60,780	\$ 1,337,153	\$ 78,660	\$ 1,730,513
3.4	345KV S/C STEEL DELTA TANGENT	5	Structure	\$ 15,860	\$ 79,300	\$ 9,516	\$ 47,580	\$ 25,376	\$ 126,880
3.5	345KV RUNNING ANGLE, STEEL	2	Structure	\$ 62,900		\$ 37,740			
3.6	345KV SELF SUPPORT DEADEND, STEEL	3	Structure	\$ 83,619	\$ 250,856	\$ 50,171	\$ 150,514	\$ 133,790	\$ 401,370
3.7	Remove Existing Foundation	50	EA	\$ -	\$ -	\$ 7,500	\$ 375,000	\$ 7,500	\$ 375,000
3.8	Remove Existing Structure and Accessories	994	EA	\$ -	\$ -	, , , , , , , , , , , , , , , , , , , ,	. , ,		\$ 12,425,000
3.9	Install Grounding and Grounding Accessories	525	Pole	\$ 506	\$ 265,650	\$ 5,539	\$ 2,907,713	\$ 6,045	\$ 3,173,363
3.10									
3.11									
3.12									
3.13									
3.14									
3.15 TOTAL - STRU	CTUDEC:				¢ 0.521.140		\$ 41,220,539		ć 40.7F1.699
					\$ 8,531,149		\$ 41,220,539		\$ 49,751,688
	DR, SHIELDWIRE, OPGW	2.504.452	15	ć 3.00	ć 7.054.007	ć 500	6 42 507 255	ć 7.00	ć 40.504.303
4.1	345kV - (1) 1033kcmil 54/7 ACSS "Curlew"	2,501,453	LF	\$ 2.82		\$ 5.00		\$ 7.82	\$ 19,561,362
4.2	(1) OPGW 36 Fiber AC-33/38/571	347,054	LF	\$ 1.35		\$ 5.00			\$ 2,203,793
4.3	(1) 7/16" EHS7 Steel	347,054	LF	\$ 0.47	L' '	\$ 5.00			\$ 1,898,385
4.4	Remove Existing Conductor and Accessories	121.0	Mile	\$ -	\$ -	, ,,,,,,	\$ 3,630,000	\$ 30,000.00	\$ 3,630,000
4.5	Remove Existing OPGW and Accessories	108.4	Mile	\$ -	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ 1,300,800	\$ 12,000.00	\$ 1,300,800
4.6	Remove Existing OHSW and Accessories	108.4	Mile	\$ -	\$ -	\$ 12,000	\$ 1,300,800	\$ 12,000.00	\$ 1,300,800
4.7	Rider Poles (187 Locations)	93	Set	\$ 1,750		7	\$ 325,500	\$ 5,250.00	\$ 488,250
4.8	Rider Poles - Relocated	94	Set	\$ -	\$ -	\$ 3,500	\$ 329,000	\$ 3,500.00	\$ 329,000
4.9									
4.10									
4.11									
4.12									
4.13									
4.14									
4.15									
4.16									
4.17									
TOTAL: COND	UCTOR, SHIELDWIRE, OPGW:				\$ 7,848,486		\$ 22,863,905		\$ 30,712,391
5. INSULATOR	R, FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	3,006	Assembly	\$ 1,800	\$ 5,410,800	\$ 720	\$ 2,164,320	\$ 2,520	\$ 7,575,120
5.2	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	360	Assembly	\$ 1,800	\$ 648,000	\$ 720	\$ 259,200	\$ 2,520	\$ 907,200
5.3			Assembly		\$ -		\$ -	\$ -	\$ -
5.4	OPGW Assembly - Tangent	501	Assembly	\$ 200	\$ 100,200	\$ 150	\$ 75,150	\$ 350	\$ 175,350
5.5	OPGW Assembly - Angle / DE	48	Assembly	\$ 250	\$ 12,000	\$ 150	\$ 7,200	\$ 400	\$ 19,200
5.6	OHSW Assembly - Tangent	501	Assembly	\$ 200	\$ 100,200	\$ 150	\$ 75,150	\$ 350	\$ 175,350
5.7	OHSW Assembly - Angle / DE	48	Assembly	\$ 250	\$ 12,000	\$ 150	\$ 7,200	\$ 400	\$ 19,200
5.8	OPGW Splice Boxes	42	Assembly	\$ 1,746	\$ 73,338	\$ 2,274	\$ 95,508	\$ 4,020	\$ 168,846
5.9	OPGW Splice & Test	42	EA	\$ 2,520	\$ 105,840	\$ 2,520	\$ 105,840	\$ 5,040	\$ 211,680
5.10	Spacer - Conductor	11,077	EA	\$ 50		\$ 35		\$ 85	\$ 941,545
5.11	Vibration Dampers - Conductor	2,658	EA	\$ 35		\$ 35		\$ 70	
5.12	Shield wire / OPGW Dampers, Misc. Fittings	1,090	EA	\$ 27		\$ 35		\$ 62	\$ 67,580
5.13		,,,,,,			,		,	-	
5.14	Replace - Mono Pole Vertical Tangent - V-String	480	Assembly	\$ 1,800	\$ 864,000	\$ 720	\$ 345,600	\$ 2,520	\$ 1,209,600
5.15	Replace - Dead-end & Angle Insulators	195	Assembly	\$ 1,800			\$ 140,400		
5.16						-	,	, .	
5.17	Guys, Anchors, and Accessories	188	EA	\$ 828	\$ 155,664	\$ 1,018	\$ 191,337	\$ 1,846	\$ 347,001
5.18	Misc. materials (Signs and Markers)	66.8	Mile	\$ 770		\$ 1,006			
5.19		-		\$ -	\$ -		\$ -	\$ -	\$ -
	LATORS, FITTINGS, HARDWARE:				\$ 8,560,788		\$ 4,052,981		\$ 12,613,769
	mission Line Edic to Princetown								\$ 142,045,942
A. II alls	illission tille edit to Printetown				\$ 26,179,971		\$ 115,865,971		J 142,045,942

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	l Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
. MOB/DEM	IOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 1,420,459	\$ 1,420,459	\$ 1,420,459	\$	1,420,45
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 7,220,195	\$ 7,220,195	\$ 7,220,195	\$	7,220,19
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 1,420,459	\$ 1,420,459	\$ 1,420,459	\$	1,420,45
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 1,420,459	\$ 1,420,459	\$ 1,420,459	\$	1,420,45
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 7,102,297	\$ 7,102,297	\$ 7,102,297	\$	7,102,29
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 426,138	\$ 426,138	\$ 426,138	\$	426,13
6.7	Geotech	55.0	Location	\$	-	\$ -	\$ 3,500	\$ 192,500	\$ 3,500	\$	192,50
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 994,322	\$ 994,322	\$ 994,322	\$	994,32
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	EA	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,00
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 426,138	\$ 426,138	\$ 426,138	\$	426,13
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ 5,555,000	\$ 5,555,000	\$ 5,555,000	\$	5,555,00
6.15	Legal Fees		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	
6.17	Compensation for use of 1 Ckt - NYPA Structures (92 Structures)	1	LS	\$	-	\$ -	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123	\$	8,919,12
6.18	Sales Tax on Materials	1	LS	\$	2,094,398	\$ 2,094,398	\$ -	\$ -	\$ 2,094,398	\$	2,094,39
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 142,046	\$ 142,046	\$ 142,046	\$	142,04
OTAL - MOB	J/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 2,094,398		\$ 35,279,137		Ś	37,373,53

B. Transmission Line Princetown to Rotterdam

Estimate Revision: 5 Total: \$ 27,614,035

NextEra - T021 Enterprise Line - (So	egmei	nt A)		
		Supply	Installation	Total
B. Transmission Line Princetown to Rotterdam				
1. CLEARING & ACCESS	\$	6,000	\$ 4,789,200	\$ 4,795,200
2. FOUNDATIONS	\$	891,972	\$ 4,104,882	\$ 4,996,854
3. STRUCTURES	\$	2,675,074	\$ 7,029,527	\$ 9,704,602
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	128,126	\$ 852,170	\$ 980,296
5. INSULATORS, FITTINGS, HARDWARE	\$	1,682,833	\$ 794,553	\$ 2,477,386
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	430,720	\$ 4,228,977	\$ 4,659,697
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	5,814,726	\$ 21,799,309	\$ 27,614,035
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	5,814,726	\$ 21,799,309	\$ 27,614,035

		D	escription of Work:						
Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Transi	mission Line Princetown to Rotterdam								
1. CLEARING 8	A ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	20.0	Acre	\$ -	\$ -	\$ 5,000		\$ 5,000	
1.3	Access Road	5,280.0	LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	26,400.0	LF	\$ -	\$ -	'	\$ 105,600		\$ 105,600
1.5	Matting - Access and ROW	21,120.0	LF	\$ -		\$ 70			
1.6	Matting - To Work Area Snow Removal	8,550.0 5.0	LF Mile	\$ - \$ -		\$ 70 \$ 16,000			
1.8	ROW Restoration	5.0	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	570,000.0	SF	\$ -	\$ -		\$ 2,006,400	\$ 10,000	
1.10	Restoration for Work Pad areas	114,000.0	SF	\$ -	\$ -	\$ 0.2		·	\$ 17,100
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	
1.13	Stabilized Construction Entrance	10	EA	\$ -	\$ -	\$ 4,580	,	\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	10	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	8	EA	\$ 750					
1.17	Concrete Washout Station RING & ACCESS:	10	EA	\$ -	\$ - \$ 6,000	\$ 1,850	\$ 18,500 \$ 4,789,200	\$ 1,850	\$ 18,500 \$ 4,795,200
2. FOUNDATIO					\$ 6,000		\$ 4,789,200		\$ 4,795,200
2.1	Direct Embed - 230KV S/C STEEL GUYED DEADEND	4	EA	\$ 1,200	\$ 4,802	\$ 8,163	\$ 32,650	\$ 9,363	\$ 37,452
2.2	Direct Embed - 230KV S/C STEEL GUYED RUNNING ANGLE	24	EA	\$ 1,416	\$ 33,990	\$ 9,631	\$ 231,132	\$ 11,047	\$ 265,122
2.3	Direct Embed - 230 KV GUYED ANGLE, STEEL	6	EA	\$ 1,471	\$ 8,828	\$ 10,005	\$ 60,027	\$ 11,476	\$ 68,855
2.4	Direct Embed - 345KV S/C CONC DELTA TANGENT	70	EA	\$ 2,229	\$ 156,021	\$ 15,156	\$ 1,060,945	\$ 17,385	\$ 1,216,966
2.5	Direct Embed - 345KV GUYED DEADEND, CONCRETE	2	EA	\$ 1,920	\$ 3,839	\$ 13,053	\$ 26,105	\$ 14,972	\$ 29,944
2.6	Drilled Pier - 345KV S/C STEEL SELF SUPPORTING DEADEND	1	EA	\$ 32,128	\$ 32,128	\$ 32,473	\$ 32,473	\$ 64,601	\$ 64,601
2.7	Drilled Pier - 345KV THREE POLE TAP, STEEL	6	EA	\$ 96,377	\$ 578,263	\$ 97,409	\$ 584,456	\$ 193,787	\$ 1,162,719
2.8	Drilled Pier - 345KV STEEL D/C DEADEND , STEEL	1	EA	\$ 74,101	\$ 74,101	\$ 74,894	\$ 74,894	\$ 148,995	\$ 148,995
2.9	Rock Excavation Adder	1,001.1	CY	\$ -	\$ -	\$ 2,000	\$ 2,002,200	\$ 2,000	\$ 2,002,200
TOTAL - FOUN					\$ 891,972		\$ 4,104,882		\$ 4,996,854
3. STRUCTURE	<u>is</u>								

Structure

17,074 \$

409,775 \$

10,244 \$

245,865 \$

655,640

27,318 \$

345KV RUNNING ANGLE, STEEL

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
3.2	345KV SELF SUPPORT DEADEND, STEEL	6	Structure	\$ 10,268	\$ 61,605	\$ 6,161	\$ 36,963	\$ 16,428	\$	98,568
3.3	230 KV GUYED DEADEND, STEEL	4	Structure	\$ 12,025	\$ 48,100	\$ 7,215	\$ 28,860	\$ 19,240	\$	76,960
3.4	345KV S/C DEADEND, STEEL	1	Structure	\$ 74,000	\$ 74,000	\$ 44,400	\$ 44,400	\$ 118,400	\$	118,400
3.5	345KV THREE POLE TAP, STEEL	6	Structure	\$ 166,500	\$ 999,000	\$ 99,900	\$ 599,400	\$ 266,400	\$	1,598,400
3.6	345KV STEEL D/C DEADEND , STEEL	1	Structure	\$ 101,750	\$ 101,750	\$ 61,050	\$ 61,050	\$ 162,800	\$	162,800
3.7	345KV S/C CONCRETE DELTA TANGENT	70	Structure	\$ 12,990	\$ 909,300	\$ 53,923	\$ 3,774,600	\$ 66,913	\$	4,683,900
3.8	345KV S/C CONCRETE GUYED RUNNING ANGLE	1	Structure	\$ 13,860	\$ 13,860	\$ 81,000		\$ 94,860	_	94,860
3.9	Remove Existing Foundation	22	EA	\$ -	\$ -	\$ 7,500		\$ 7,500		163,500
3.10	Remove Existing Structure and Accessories	109	EA	\$ -	\$ -	\$ 12,500	\$ 1,362,500	\$ 12,500	s	1,362,500
3.11	Install Grounding and Grounding Accessories	114	Pole	\$ 506	\$ 57,684	\$ 5,539		\$ 6,045		689,073
3.12										
3.13										
TOTAL - STRU	CTURES PRINCTOWN TO NEW SCOTLAND:				\$ 2,675,074		\$ 7,029,527		\$	9,704,602
	R, SHIELDWIRE, OPGW									
4.1	345kV - (1) 1033kcmil 54/7 ACSS "Curlew"	-	LF	\$ 2.82	\$ -	\$ 5.00	\$ -	\$ 7.82	\$	-
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35	\$ -	\$ 5.00		\$ 6.35		-
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ 0.47	\$ -	\$ 5.00		\$ 5.47	_	-
4.5	230V - (1) 1033kcmil 54/7 ACSS "Curlew"	33,264	LF	\$ 2.82	\$ 93,804	\$ 5.00	\$ 166,320	\$ 7.82	\$	260,124
4.6	(1) OPGW 36 Fiber AC-33/38/571	4,435	LF	\$ 1.35	\$ 5,987	\$ 5.00	\$ 22,175	\$ 6.35	\$	28,162
4.7	(1) 3/8" EHS7 Steel	4,435	LF	\$ 0.47	\$ 2,084	\$ 5.00	\$ 22,175	\$ 5.47	\$	24,259
4.8	Remove Existing Conductor and Accessories	10.0	Mile	\$ -	\$ -	\$ 30,000	\$ 300,000	\$ 30,000.00	\$	300,000
4.9	Remove Existing OPGW and Accessories	10.0	Mile	\$ -	\$ -	\$ 12,000	\$ 120,000	\$ 12,000.00	\$	120,000
4.10	Remove Existing OHSW and Accessories	10.0	Mile	\$ -	\$ -	\$ 12,000	\$ 120,000	\$ 12,000.00	\$	120,000
4.11					•	,		,		
4.12	Rider Poles	15	EA	\$ 1,750	\$ 26,250	\$ 3,500	\$ 52,500	\$ 5,250.00	\$	78,750
4.13	Rider Poles - Relocated	14	Set	\$ -	\$ -	\$ 3,500			_	49,000
4.14				T	Ŧ	7 2,000	7 10,000	7 0,000.00	-	,
	UCTOR, SHIELDWIRE, OPGW:				\$ 128,126		\$ 852,170		\$	980,296
5. INSULATOR	, FITTINGS, HARDWARE									
5.1	230kV/345kV Tangent (1-Group of 18-Bells Each Assembly)	600	Assembly	\$ 1,800	\$ 1,080,000	\$ 720	\$ 432,000	\$ 2,520	\$	1,512,000
5.2	230kV/345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	210	Assembly	\$ 1,800	\$ 378,000	\$ 720	\$ 151,200	\$ 2,520	\$	529,200
5.3			Assembly		\$ -		\$ -	\$ -	\$	-
5.4	OPGW Assembly - Tangent	100	Assembly	\$ 200	\$ 20,000	\$ 150	\$ 15,000	\$ 350	\$	35,000
5.5	OPGW Assembly - Angle / DE	28	Assembly	\$ 250	\$ 7,000	\$ 150	\$ 4,200	\$ 400	\$	11,200
5.6	OHSW Assembly - Tangent	100	Assembly	\$ 200	\$ 20,000		\$ 15,000	\$ 350	\$	35,000
5.7	OHSW Assembly - Angle / DE	28	Assembly	\$ 250	\$ 7,000	\$ 150	\$ 4,200	\$ 400	_	11,200
5.8	OPGW Splice Boxes	8	Assembly	\$ 1,746	\$ 13,969	\$ 2,274		\$ 4,020		32,161
5.9	OPGW Splice & Test	8	EA	\$ 2,520	\$ 20,160	\$ 2,520		\$ 5,040	_	40,320
5.10	Spacer - Conductor	1,038	EA	\$ 50	\$ 51,900	\$ 35		\$ 85	_	88,230
5.11	Vibration Dampers - Conductor	830	EA	\$ 35				\$ 70		58,100
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	210	EA	\$ 27	\$ 5,670	\$ 35		\$ 62	_	13,020
5.13	Guys, Anchors, and Accessories	64.0	EA	\$ 720		\$ 885		\$ 1,605	_	102,720
5.14	Misc. materials (Signs and Markers)	5.2	Mile	\$ 770	\$ 4,004	\$ 1,006		\$ 1,776	_	9,235
	ATORS, FITTINGS, HARDWARE:	5.2		770	\$ 1,682,833	- 2,000	\$ 794,553	÷ 2,770	Ś	2,477,386
B. Trans	mission Line Princetown to Rotterdam				\$ 5,384,005		\$ 17,570,333		\$	22,954,338
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS									
	Contractor Mobilization / Demobilization				_			A	_	
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 229,543	\$ 229,543	\$ 229,543	\$	229,543
6.2	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost	1	LS			\$ 1,166,769	\$ 1,166,769	\$ 1,166,769	\$	1,166,769
6.3	Manager, SHEQ Staff, and Admin Staff) Utility PM and Project Oversite	1	LS		\$ -	\$ 229,543				229,543
J.5	1	1 -	1 23		Ŧ	- 225,545	- 223,343	- 225,343	1 7	

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 229,543	\$ 229,543	\$ 229,543	\$ 229,543
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 1,147,717	\$ 1,147,717	\$ 1,147,717	\$ 1,147,717
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 68,863	\$ 68,863	\$ 68,863	\$ 68,863
6.7	Geotech	5	Location	\$ -	\$ -	\$ 3,500	\$ 17,500	\$ 3,500	\$ 17,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 160,680	\$ 160,680	\$ 160,680	\$ 160,680
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	EA	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation		LS	\$ -	\$ -	\$ -	\$ -	\$	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 68,863	\$ 68,863	\$ 68,863	\$ 68,863
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 847,000	\$ 847,000	\$ 847,000	\$ 847,000
6.15	Legal Fees	-	LS	\$ -	\$ -		\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 430,720	\$ 430,720	\$ -	\$ -	\$ 430,720	\$ 430,720
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 22,954	\$ 22,954	\$ 22,954	\$ 22,954
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 430,720		\$ 4,228,977		\$ 4,659,697

NextEra - T021 Enterprise Line - (Segment A) C. Transmission Line Princetown to New Scotland

Estimate 5 Total: \$ 48,710,925 Revision:

NextEra - T021 Enterprise Line - (Segn	NextEra - T021 Enterprise Line - (Segment A)												
		Supply		Installation		Total							
C. Transmission Line Princetown to New Scotland													
1. CLEARING & ACCESS	\$	88,000	\$	11,773,438	\$	11,861,438							
2. FOUNDATIONS	\$	257,730	\$	2,717,364	\$	2,975,094							
3. STRUCTURES	\$	3,192,349	\$	12,052,512	\$	15,244,861							
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	2,212,093	\$	4,756,290	\$	6,968,383							
5. INSULATORS, FITTINGS, HARDWARE	\$	2,164,996	\$	1,023,701	\$	3,188,698							
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	633,213	\$	7,839,238	\$	8,472,452							
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-							
SUBTOTAL:	\$	8,548,381	\$	40,162,544	\$	48,710,925							
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-							
TOTAL:	\$	8,548,381	\$	40,162,544	\$	48,710,925							

escrip	ption of	Wor	k:
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1.2 Clearing the ROW - Light (mowning)	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1.1 Clearing the ROW - Heavy (moving & Clearing)	C. Trans	mission Line Princetown to New Scotland								
1.2 Clearing the ROW - Light (mowing)	1. CLEARING 8	ACCESS								
1.1 Access Road	1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.5	1.2	Clearing the ROW - Light (mowing)	40.0	Acre	\$ -	\$ -	\$ 5,000	\$ 200,000	\$ 5,000	\$ 200,000
1.5 Matting-1 Access and ROW 84,057.6 LF S S S S S S S S S	1.3	Access Road		LF	\$ -	\$ -	\$ 45			\$ 945,648
1.0	1.4	Silt Fence	105,072.0	LF	\$ -	\$ -				\$ 420,288
1.7 Show Restoration 19.9 1.5 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 .					\$ -	\$ -				
18 ROW Reutoration 190 Mile \$ - \$ \$ \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,000 \$ 190,			,			-				
1-9						т				
1.10 Restoration for Work Pad areas						-				
1.11 Temporary Access Bridge						т				
1.12 Air Bridge						-	·			
1.13 Stabilized Construction Entrance 76.0 EA \$					•	'				
1.14 Maintenance and Protection of Traffic on Public Roads 30.0 EA 5 75.0 \$ 22,500 \$ 3,7500 \$ 2,000 \$ 60.0 \$ 1.15 6 6 6 5 75.0 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$		<u> </u>			,	·				
1.15 Galtes 1.10 EA \$ 2,000 \$ 2,200 \$ 2,200 \$ 2,200 \$ 2,200 \$ 3,200 \$ 4,500 \$ 43,500 \$ 1.15					•	т				
1.16 Culverts / Misc. Access 58.0 EA \$ 750 \$ 43,500 \$ 1,250 \$ 72,000 \$ 1,000 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140 \$ 1,140										
1.17 Concrete Washout Station 76.0 EA S S S 149,000 S 1,850 S 140,000 S 1,850 S 140,000 S 1,850 S 140,000 S 1,850 S 1,850 S 140,000 S 1,850										
S		·			,					
2. FOUNDATIONS			76.0	EA	\$ -		\$ 1,850		\$ 1,850	
2.1 Drilled Pier - 345KV SELE SUPPORT DEADEND, STEEL 3 EA \$ 7.9.18 \$ 218,733 \$ 73,699 \$ 221,096 \$ 146,616 \$ 439,8						\$ 88,000		\$ 11,773,438		\$ 11,861,438
2			-							
2.3 Drilled Pier - 345KV VERTICAL TANGENT, STEEL 2 EA 5 32,128 5 64,257 5 32,473 5 64,945 5 64,601 5 12,02										
2.4										
2.5 Direct Embed - 345KV VERTICAL TANGENT, CONCRETE 37 EA \$ 1,881 \$ 69,597 \$ 12,791 \$ 473,260 \$ 14,672 \$ 542,8 2.6 Direct Embed - 345KV VERNINING ANGLE, CONCRETE 5 EA \$ 1,920 \$ 9,598 \$ 13,033 \$ 65,263 \$ 14,972 \$ 74,8 2.7 Direct Embed - 345KV VERTICAL D/C TANGENT, CONCRETE 4 4 EA \$ 1,800 \$ 7,200 \$ 12,239 \$ 48,957 \$ 14,093 \$ 56,1 2.8 Direct Embed - 345KV VERTICAL D/C TANGENT, CONCRETE 18 EA \$ 2,027 \$ 36,482 \$ 13,782 \$ 248,074 \$ 15,809 \$ 284,5 2.9 Rock Excavation Adder 482.4 CY \$ \$ \$ 2,000 \$ 964,800 \$ 2,000 \$ 964,800 \$ 284,5 2.10										
2.6 Direct Embed - 345KV RUNNING ANGLE, CONCRETE 5 EA \$ 1,920 \$ 9,598 \$ 13,053 \$ 65,263 \$ 14,972 \$ 74,8										
2.7 Direct Embed - 345KV GUYED DEADEND, CONCRETE										
2.8 Direct Embed - 345KV VERTICAL D/C TANGENT, CONCRETE					, , , , ,					
2.9 Rock Excavation Adder 482.4 CY \$ - \$ 2,000 \$ 964,800 \$ 2,000 \$ 964,80 2.10 2.11 2.12 2.13 2.14 2.15 TOTAL - FOUNDATIONS: 3.5TRUCTURES 3.1 345KV D/C CONCRETE VERTICAL TANGENT 3.1 345KV D/C CONCRETE VERTICAL TANGENT 3.2 345KV S/C CONCRETE DELITA TANGENT 5 21,000 \$ 964,800 \$ 2,000 \$ 964,80		·								
2.10	2.8	Direct Embed - 345KV VERTICAL D/C TANGENT, CONCRETE	18	EA	\$ 2,027	\$ 36,482	\$ 13,/82	\$ 248,074	\$ 15,809	\$ 284,556
2.11	2.9	Rock Excavation Adder	482.4	СУ	\$ -	\$ -	\$ 2,000	\$ 964,800	\$ 2,000	\$ 964,800
2.12	2.10									
2.13	2.11									
2.14	2.12									
2.15 CONCRETE VERTICAL TANGENT S 2.57,730 \$ 2,717,364 \$ 2,975,0 3.1 345KV D/C CONCRETE VERTICAL TANGENT 18 Structure \$ 21,737 \$ 391,266 \$ 84,708 \$ 1,524,752 \$ 1916,045 \$ 1,916,00 3.2 345KV S/C CONCRETE DELTA TANGENT \$ 21,214 \$ 1,400,124 \$ 84,051 \$ 5,547,366 \$ 105,265 \$ 6,947,4	2.13									
TOTAL - FOUNDATIONS: \$ 257,730 \$ 2,717,364 \$ 2,975,00 3. STRUCTURES S STRUCTURES S 257,730 \$ 2,717,364 \$ 2,975,00 3.1 345KV D/C CONCRETE VERTICAL TANGENT 18 Structure \$ 21,737 \$ 391,266 \$ 84,708 \$ 1,524,752 \$ 106,445 \$ 1,916,00 3.2 345KV S/C CONCRETE DELTA TANGENT 66 Structure \$ 21,214 \$ 1,400,124 \$ 84,051 \$ 5,547,366 \$ 105,265 \$ 6,947,40	2.14									
3.1 345KV D/C CONCRETE VERTICAL TANGENT 18 Structure \$ 21,737 \$ 391,266 \$ 84,708 \$ 1,524,752 \$ 106,445 \$ 1,916,0 3.2 345KV S/C CONCRETE DELTA TANGENT 66 Structure \$ 21,214 \$ 1,400,124 \$ 84,051 \$ 5,547,366 \$ 105,265 \$ 6,947,4	2.15									
3.1 345KV D/C CONCRETE VERTICAL TANGENT 18 Structure \$ 21,737 \$ 391,266 \$ 84,708 \$ 1,524,752 \$ 1,916,00 3.2 345KV S/C CONCRETE DELTA TANGENT 66 Structure \$ 21,214 \$ 1,400,124 \$ 84,051 \$ 5,547,366 \$ 1,052,65 \$ 6,947,4	TOTAL - FOUN	DATIONS:				\$ 257,730		\$ 2,717,364		\$ 2,975,094
3.2 345KV S/C CONCRETE DELTA TANGENT 66 Structure \$ 21,214 \$ 1,400,124 \$ 84,051 \$ 5,547,366 \$ 105,265 \$ 6,947,4	3. STRUCTURE	S								
	3.1	345KV D/C CONCRETE VERTICAL TANGENT	18	Structure	\$ 21,737	\$ 391,266	\$ 84,708	\$ 1,524,752	\$ 106,445	\$ 1,916,018
3.3 345KV S/C CONCRETE GLYFD DEADEND 4 Structure \$ 17.563 \$ 70.252 \$ 59.114 \$ 236.455 \$ 76.677 \$ 306.70	3.2	345KV S/C CONCRETE DELTA TANGENT	66	Structure	\$ 21,214	\$ 1,400,124	\$ 84,051	\$ 5,547,366	\$ 105,265	\$ 6,947,490
	3.3	345KV S/C CONCRETE GUYED DEADEND	4	Structure	\$ 17,563	\$ 70,252	\$ 59,114	\$ 236,455	\$ 76,677	\$ 306,707

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.4	345KV S/C CONCRETE GUYED RUNNING ANGLE	5	Structure	\$ 17,563	\$ 87,815	\$ 62,417	\$ 312,086	\$ 79,980	\$ 399,901
3.5	345KV S/C CONCRETE VERTICAL TANGENT	37	Structure	\$ 21,214		\$ 84,051	\$ 3,109,887	\$ 105,265	\$ 3,894,805
3.6	345KV S/C STEEL SELF SUPPORTING DEADEND	3	Structure	\$ 80,217		\$ 48,130	\$ 144,391	\$ 128,348	\$ 385,043
3.7	345KV S/C STEEL VERTICAL TANGENT	2		\$ 37,000			\$ 44,400	\$ 59,200	\$ 118,400
3.8	345KV VERTICAL D/C TANGENT, STEEL	2	Structure	\$ 37,000	\$ 74,000	\$ 22,200	\$ 44,400	\$ 59,200	\$ 118,400
3.9	Remove Existing Foundation	4	EA	\$ -	\$ -	,	\$ 30,000	\$ 7,500	\$ 30,000
3.10	Remove Existing Structure and Accessories	24	EA	\$ -	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ 300,000		\$ 300,000
3.11	Install Grounding and Grounding Accessories	137	Pole	\$ 506	\$ 69,322	\$ 5,539	\$ 758,775	\$ 6,045	\$ 828,097
3.12									
3.14									
3.15									
3.16									
3.17									
3.18									
3.19									
3.20									
OTAL - STRU	UCTURES:				\$ 3,192,349		\$ 12,052,512		\$ 15,244,861
. CONDUCTO	OR, SHIELDWIRE, OPGW								
4.1	345kV - (1) 1033kcmil 54/7 ACSS "Curlew"	661,954	LF	\$ 2.82	\$ 1,866,710	\$ 5.00	\$ 3,309,770	\$ 7.82	\$ 5,176,480
4.2	(1) OPGW 36 Fiber AC-33/38/571	110,326	LF	\$ 1.35	\$ 148,940	\$ 5.00	\$ 551,630		\$ 700,570
4.3	(1) 3/8" EHS7 Steel	75,398	LF	\$ 0.47	\$ 35,437	\$ 5.00	\$ 376,990	\$ 5.47	\$ 412,427
4.4	115kV - (1) 1033kcmil 54/7 ACSS "Curlew"	41,580	LF	\$ 2.82		\$ 5.00	\$ 207,900	\$ 7.82	\$ 325,156
4.5	(1) OPGW 36 Fiber AC-33/38/571	41,380	LF	\$ 1.35		\$ 5.00			\$ 323,130
4.6	(1) 3/8" EHS7 Steel	_	LF	\$ 0.47		\$ 5.00		\$ 5.47	
4.7		2.5	Mile	\$ -	\$ -	\$ 30,000	\$ 75,000		\$ 75,000
	Remove Existing Conductor and Accessories				+ '				
4.8	Remove Existing OPGW and Accessories	2.5	Mile	\$ -		\$ 12,000			\$ 30,000
4.9	Remove Existing OHSW and Accessories	2.5	Mile	\$ -	\$ -	\$ 12,000	\$ 30,000	\$ 12,000.00	\$ 30,000
4.10									
4.11									
4.12	Rider Poles (50 Locations)	25	EA	\$ 1,750	\$ 43,750	\$ 3,500	\$ 87,500	\$ 5,250.00	\$ 131,250
4.13	Rider Poles - Relocated	25	Set	\$ -	\$ -	\$ 3,500	\$ 87,500	\$ 3,500.00	\$ 87,500
	DUCTOR, SHIELDWIRE, OPGW:			T	\$ 2,212,093	7 2,555	\$ 4,756,290	,	\$ 6,968,383
	R, FITTINGS, HARDWARE				, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , , , , ,		, ,,,,,,,,
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	900	Assembly	\$ 1,800	\$ 1,620,000	\$ 720	\$ 648,000	\$ 2,520	\$ 2,268,000
5.2	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	105	Assembly	\$ 1,800	\$ 189,000	\$ 720	\$ 75,600	\$ 2,520	\$ 264,600
5.3			Assembly		\$ -		\$ -	\$ -	\$ -
5.4	OPGW Assembly - Tangent	130	Assembly	\$ 200		\$ 150			\$ 45,500
5.5	OPGW Assembly - Angle / DE	14	Assembly	\$ 250		\$ 150			\$ 5,600
5.6	OHSW Assembly - Tangent	130	Assembly	\$ 200			\$ 19,500		\$ 45,500
5.7	OHSW Assembly - Angle / DE	14	Assembly	\$ 250 \$ 1,746		\$ 150			\$ 5,600
5.8	OPGW Splice Boxes OPGW Splice & Test	8	Assembly EA	\$ 1,746 \$ 2,520		\$ 2,274 \$ 2,520			
5.10	Spacer - Conductor	3,734	EA		\$ 20,160	\$ 2,520		\$ 5,040	\$ 317,390
5.11	Vibration Dampers - Conductor	896	EA	•	\$ 31,360	\$ 35			\$ 62,720
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	132	EA		\$ 3,564	\$ 35	\$ 4,620	\$ 62	\$ 8,184
5.13	Guys, Anchors, and Accessories	36	EA	\$ 720					\$ 57,780
5.14	Misc. materials (Signs and Markers)	19.9		\$ 770					
5.15 5.16						-			-
5.17									
5.18									
5.19									
5.20		-		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	LATORS, FITTINGS, HARDWARE:				\$ 2,164,996		\$ 1,023,701		\$ 3,188,698
	mission Line Princetown to New Scotland				\$ 7,915,168		\$ 32,323,305		\$ 40,238,473
. MOB/DEM	IOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								D 10 -655

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 402,385	\$ 402,385	\$ 402,385	\$ 402,385
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 2,045,322	\$ 2,045,322	\$ 2,045,322	\$ 2,045,322
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 402,385	\$ 402,385	\$ 402,385	\$ 402,385
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 402,385	\$ 402,385	\$ 402,385	\$ 402,385
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 2,011,924	\$ 2,011,924	\$ 2,011,924	\$ 2,011,924
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 120,715	\$ 120,715	\$ 120,715	\$ 120,715
6.7	Geotech	21	Location	\$ -	\$ -	\$ 3,500	\$ 73,500	\$ 3,500	\$ 73,500
6.8	Surveying/Staking	1	Mile	\$ -	\$ -	\$ 281,669	\$ 281,669	\$ 281,669	\$ 281,669
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	EA	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 120,715	\$ 120,715		
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ 218,000	\$ 218,000		\$ 218,000
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 1,680,000	\$ 1,680,000	\$ 1,680,000	\$ 1,680,000
6.15	Legal Fees	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 633,213	\$ 633,213	\$ -	\$ -	\$ 633,213	\$ 633,213
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 40,238		\$ 40,238	
TOTAL - MOE	J/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 633,213		\$ 7,839,238		\$ 8,472,452

D. Princetown Substation - Install

Estimate Revision: 5 Total: \$ 50,824,310

NextEra - T021 Enterp	rise Line - (Segn	nent A)			
		Supply	Installation	Total	
D. Princetown Substation - Install]
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	440,750	\$ 3,451,500	\$ 3,892,250]
2. SUBSTATION FOUNDATIONS	\$	3,436,513	\$ 3,680,200	\$ 7,116,713]
3. SUBSTATION STRUCTURES	\$	1,426,720	\$ 1,426,720	\$ 2,853,440	1
4. MAJOR EQUIPTMENT	\$	8,890,000	\$ 2,540,000	\$ 11,430,000	1
5. SMALL EQUIPTMENT / MATERIALS	\$	2,338,000	\$ 1,215,000	\$ 3,553,000	1
6. CONTROL HOUSE / PANELS	\$	4,021,205	\$ 2,135,205	\$ 6,156,410	1
7. MISC ITEMS	\$	1,825,778	\$ 3,468,853	\$ 5,294,631	1
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,790,317	\$ 8,737,549	\$ 10,527,866	1
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -	0.0
SUBTOTAL:	\$	24,169,283	\$ 26,655,027	\$ 50,824,310	1
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -	0.0
TOTAL:	\$	24,169,283	\$ 26,655,027	\$ 50,824,310	1

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply R	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Prince	etown Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	9.4	ACRES	\$	-	\$ -	\$ 230,000	\$ 2,156,250	\$ 230,000	\$ 2,156,250
1.2	Station stone within substation fence.	4,000	CY	\$	27	\$ 108,000	\$ 75	\$ 300,000	\$ 102	\$ 408,000
1.3	Substation Fence	2,400	LF	\$	100	\$ 240,000	\$ 100	\$ 240,000	\$ 200	\$ 480,000
1.4	Retaining Wall (1065' x 13')			\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
1.5	Compacted Fill (124,583cy Sand)			\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
1.6	Permanent Access Road - 20'-Wide (From Coplon Road)	2,650	LF	\$	35	\$ 92,750	\$ 285	\$ 755,250	\$ 320	\$ 848,000
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 440,750		\$ 3,451,500		\$ 3,892,250
2. SUBSTATIO	FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	7	EA	\$ 14,	940	\$ 104,580	\$ 16,000	\$ 112,000	\$ 30,940	\$ 216,580
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,	025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	16	EA	\$ 26,	145	\$ 418,320	\$ 28,000	\$ 448,000	\$ 54,145	\$ 866,320
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,	145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	108	EA	\$ 4,	482	\$ 484,056	\$ 4,800	\$ 518,400	\$ 9,282	\$ 1,002,456
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,	482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	122	EA	\$ 4,	482	\$ 546,804	\$ 4,800	\$ 585,600	\$ 9,282	\$ 1,132,404
2.1j	Instrument Transformer Stand Foundations	30	EA	\$ 4,	482	\$ 134,460	\$ 4,800	\$ 144,000	\$ 9,282	\$ 278,460
2.1k	Arrester Stand Foundations	6	EA	\$ 4,	482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1m	Wave Trap Stand Foundations	2	EA	\$ 4,	482	\$ 8,964	\$ 4,800	\$ 9,600	\$ 9,282	\$ 18,564
2.1n	Misc. Structure Foundations	1	EA	\$ 7,	470	\$ 7,470	\$ 8,000	\$ 8,000	\$ 15,470	\$ 15,470

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply F	tate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.1p	Transformer Firewalls	0	EA	\$ 65,	736	\$ -	\$ 70,400	\$ -	\$ 136,136	\$	-
2.1q											
2.2	230kV										
2.2a	Circuit Breaker Foundations	6	EA	\$ 11,	952	\$ 71,712	\$ 12,800	\$ 76,800	\$ 24,752	\$	148,512
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,	820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$	-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	20	EA	\$ 22,	410	\$ 448,200	\$ 24,000	\$ 480,000	\$ 46,410	\$	928,200
2.2d	Caisson DE Foundations (for DE A frame str shared column)	12	EA	\$ 22,	410	\$ 268,920	\$ 24,000	\$ 288,000	\$ 46,410	\$	556,920
2.2e	Switch Stand Foundations	56	EA	\$ 3,	735	\$ 209,160	\$ 4,000	\$ 224,000	\$ 7,735	\$	433,160
2.2f	Station Service Transformer Stand Foundation	4	EA	\$ 3,	735	\$ 14,940	\$ 4,000	\$ 16,000	\$ 7,735	\$	30,940
2.2g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.2h	Bus Support 1 Ph Foundations	57	EA	\$ 3,	735	\$ 212,895	\$ 4,000	\$ 228,000	\$ 7,735	\$	440,895
2.2j	Instrument Transformer Stand Foundations	30	EA	\$ 3,	735	\$ 112,050	\$ 4,000	\$ 120,000	\$ 7,735	\$	232,050
2.2k	Arrester Stand Foundations	6	EA	\$ 3,	735	\$ 22,410	\$ 4,000	\$ 24,000	\$ 7,735	\$	46,410
2.2m	Wave Trap Stand Foundations	2	EA	\$ 3,	735	\$ 7,470	\$ 4,000	\$ 8,000	\$ 7,735	\$	15,470
2.2n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.2p											
2.3	115kV										
2.3a	Circuit Breaker Foundations		EA	\$ 5,	229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$	-
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,	615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$	-
2.3c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ 16,	434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$	-
2.3d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$ 16,	434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$	
2.3e	Switch Stand Foundations		EA	\$ 2,	988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3f	Fuse Stand Foundations		EA	\$ 2,	988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3g	Bus Support 3ph Foundations		EA	\$ 2,	988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3h	Bus Support 1 Ph Foundations		EA	\$ 2,	988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3j	Instrument Transformer Stand Foundations		EA	\$ 2	988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
	Arrester Stand Foundations		EA		988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	
2.3m	Wave Trap Stand Foundations		EA	\$ 2,	988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	
2.3n	Station Service Foundations		EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	Misc. Structure Foundations		EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	
						·				-	
2.4	Transformer Foundations										
2.4a	345-230kV Transformer Foundation w/ Oil Containment	2	EA	\$ 97,	110	\$ 194,220	\$ 104,000	\$ 208,000	\$ 201,110	\$	402,220
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,	700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$	-
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	
2.5	Control House Foundations / Pad										
2.5a	Control House / Pad (45' x120')	1	EA	\$ 74,	700	\$ 74,700	\$ 80,000	\$ 80,000	\$ 154,700	\$	154,700
2.5b	Generator Foundation	1	EA	\$ 16,	000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$	33,000
											-
2.6	Lightning Mast Foundations										
2.6a	70' Lightning Mast Foundation	10	EA	\$ 5,	229	\$ 52,290	\$ 5,600	\$ 56,000	\$ 10,829	\$	108,290
2.6b					_	\$ -	\$ -	\$ -	\$ -	\$	-
2.6c				\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
											-
TOTAL - SUBS ¹	FATION FOUNDATIONS					\$ 3,436,513		\$ 3,680,200		\$	7,116,713
	N STRUCTURES										, ., ==

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	
3.1	345kV									
3.1a	Substation A-Frame Structures - Stand alone	4	EA	\$ 37,000	\$ 148,000	\$ 37,000	\$ 148,000	\$ 74,000	\$ 296,000	
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -	
3.1c	Switch Stands	18	EA	\$ 14,800	\$ 266,400	\$ 14,800	\$ 266,400	\$ 29,600	\$ 532,800	
3.1d	Station Service Transformer Stand	1	EA	\$ 14,800	\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$ 29,600	
3.1e	Bus Support 3ph	59	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
3.1f	Bus Support 1 Ph	63	EA	\$ 3,700	\$ 233,100	\$ 3,700	\$ 233,100	\$ 7,400	\$ 466,200	
3.1g	Instrument Transformer Stand	30	EA	\$ 1,850	\$ 55,500	\$ 1,850	\$ 55,500	\$ 3,700	\$ 111,000	
3.1h	Arrester Stand	6	EA	\$ 1,850	\$ 11,100	\$ 1,850	\$ 11,100	\$ 3,700	\$ 22,200	
3.1j	Wave Trap Stand	2	EA	\$ 7,400	\$ 14,800	\$ 7,400	\$ 14,800	\$ 14,800	\$ 29,600	
3.1k	Misc. Structures	7	EA	\$ 6,475	\$ 45,325	\$ 6,475	\$ 45,325	\$ 12,950	\$ 90,650	
3.2	230kV									
3.2a	Substation A-Frame Structures - Stand alone	5	EA	\$ 33,300	\$ 166,500	\$ 33,300	\$ 166,500	\$ 66,600	\$ 333,000	
3.2b	Substation A-Frame Structures - Shared Column	4	EA	\$ 33,300	\$ 133,200	\$ 33,300	\$ 133,200	\$ 66,600	\$ 266,400	
3.2c	Switch Stands	14	EA	\$ 12,025	\$ 168,350	\$ 12,025	\$ 168,350	\$ 24,050	\$ 336,700	
3.2d	Station Service Transformer Stand	1	EA	\$ 12,025	\$ 12,025	\$ 12,025	\$ 12,025	\$ 24,050	\$ 24,050	
3.2e	Bus Support 3ph	28	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
3.2f	Bus Support 1 Ph	29	EA	\$ 2,775	\$ 80,475	\$ 2,775	\$ 80,475	\$ 5,550	\$ 160,950	
3.2g	Instrument Transformer Stand	30	EA	\$ 1,295	\$ 38,850	\$ 1,295	\$ 38,850	\$ 2,590	\$ 77,700	
3.2h	Arrester Stand	6	EA	\$ 1,295				\$ 2,590	\$ 15,540	
3.2j	Wave Trap Stand	2	EA	\$ 5,550	\$ 11,100		\$ 11,100	\$ 11,100	\$ 22,200	
3.2k	Misc. Structures	3	EA	\$ 6,475	\$ 19,425		\$ 19,425	\$ 12,950	\$ 38,850	
		-		,				, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
3.3	115kV									
	TATION STRUCTURES				\$ 1,426,720		\$ 1,426,720		\$ 2,853,440	
4. MAJOR EQU					7 1,420,720		7 1,420,720		2,033,440	
4.1	345kV									
4.1a	Circuit Breakers	7	EA	\$ 200,000	\$ 1,400,000	\$ 80,000	\$ 560,000	\$ 280,000	\$ 1,960,000	
4.1b	Capacitor Banks with Reactors	0	EA	\$ -	\$ -		\$ -	\$ 80,000		
4.1c	345 kV - 230 kV Auto Transformer	2	EA	\$ 3,400,000	\$ 6,800,000	\$ 750,000	\$ 1,500,000	\$ 4,150,000	\$ 8,300,000	
4.1c	345 kV - 115 kV Auto Transformer	0	EA	3 3,400,000	\$ 0,800,000	\$ 750,000	\$ 1,300,000	\$ 750,000	\$ 8,300,000	
4.1d 4.1e	343 KV - 113 KV Auto Hallstoffliel	0	LA			\$ 730,000	-	3 /30,000	-	
4.1e	230kV									
		6	ΕΛ	\$ 115,000	¢ 600,000	\$ 80,000	ć 490,000	ć 10F.000	ć 1 170 000	
4.2a 4.2b	Circuit Breakers Capacitor Banks	6	EA EA	\$ 115,000 \$ -	\$ 690,000 \$ -	\$ 80,000 \$ 80,000	\$ 480,000 \$ -	\$ 195,000 \$ 80,000	\$ 1,170,000 \$ -	
4.20	Capacitor Bariks	U	EA	Ş -	ş -	\$ 80,000	ş -	\$ 80,000	-	
4.3	115kV									
			EA	\$ 52,000	ć	\$ 60,000	\$ -	\$ 112,000	\$ -	
4.3a	Circuit Breakers		EA		\$ - \$ -			· · · · · · · · · · · · · · · · · · ·	•	
4.3b	Capacitor Banks		EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -	
TOTAL - MAJO	OR EQUIPTMENT				\$ 8,890,000		\$ 2,540,000		\$ 11,430,000	
	IPTMENT / MATERIALS						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, 11,100	
5.1	345kV									
5.1a	Line Switches - 3ph w/ motor operator	4	EA	\$ 40,000	\$ 160,000	\$ 15,000	\$ 60,000	\$ 55,000	\$ 220,000	
5.1b	Disconnect Switches - 3ph w/ manual operator	14	EA	\$ 35,000	\$ 490,000	· ·	\$ 245,000	\$ 52,500		
5.1c	VT'S	6	EA	\$ 25,000	\$ 150,000			\$ 37,000		
5.1d	CT'S	6	EA	\$ 13,000	\$ 78,000		\$ 48,000	\$ 21,000		
				,						
5.1e	CCVT'S	18	EA	\$ 13,000	\$ 234,000	\$ 8,000	\$ 144,000	\$ 21,000	\$ 378,000	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	т	TOTAL
5.1g	Wave Traps	2	EA	\$ 13,000	\$ 26,000	\$ 8,000	\$ 16,000	\$ 21,000	\$	42,000
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$	250,000
5.1j										
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	4	EA	\$ 35,000	\$ 140,000	\$ 15,000	\$ 60,000	\$ 50,000	\$	200,000
5.2b	Disconnect Switches - 3ph w/ manual operator	12	EA	\$ 30,000	\$ 360,000	\$ 17,500	\$ 210,000	\$ 47,500	\$	570,000
5.2c	VT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$	126,000
5.2d	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$	126,000
5.2e	CCVT'S	18	EA	\$ 10,000	\$ 180,000	\$ 6,000	\$ 108,000	\$ 16,000	\$	288,000
5.2f	Arresters	12	EA	\$ 5,000	\$ 60,000	\$ 6,000	\$ 72,000	\$ 11,000	\$	132,000
5.2g	Wave Traps	2	EA	\$ 13,000	\$ 26,000	\$ 8,000	\$ 16,000	\$ 21,000	\$	42,000
5.2h	Station Service Transformers	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.2j										
5.3	115kV									
5.3a	Line Switches - 3ph w/ motor operator		EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$	-
5.3b	Disconnect Switches - 3ph w/ manual operator		EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$	-
5.3c	VT'S		EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.3d	CT'S		EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.3e	CCVT'S		EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$	-
5.3f	Arresters		EA	\$ 3,420	\$ -	\$ 6,000	\$ -	\$ 9,420	\$	-
5.3g	Wave Traps		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3h	Station Service Transformers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3j	Fuses		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
	LEQUIPTMENT / MATERIALS				\$ 2,338,000		\$ 1,215,000		\$	3,553,000
	HOUSE / PANELS / GENERATOR									
6.1	CONTROL HOUSE	1	EA	\$ 1,026,000	\$ 1,026,000	\$ 85,000	\$ 85,000	\$ 1,111,000	\$	1,111,000
6.2	Protection and Telecom Equipment Panels	43	EA	\$ 35,000	\$ 1,505,000	\$ 10,000	\$ 430,000	\$ 45,000	\$	1,935,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$	200,000
6.4	Control Cables	1	LS	\$ 975,205	\$ 975,205	\$ 975,205	\$ 975,205	\$ 1,950,410	\$	1,950,410
6.5	SCADA and Communications	1	EA	\$ 50,000	\$ 50,000	\$ 100,000	\$ 100,000	\$ 150,000	\$	150,000
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
	 ROL HOUSE / PANELS / GENERATOR				\$ 4,021,205		\$ 2,135,205		\$	6,156,410
7. MISC ITEMS	5									
7.1	Conduit & Cable Trench System	2,000	LF	\$ 185.00	\$ 370,000	\$ 170.00	\$ 340,000	\$ 355	\$	710,000
7.2	Rigid Bus, Fittings & Insulators	5,000	LF	\$ 125.07	\$ 625,350	\$ 237.10	\$ 1,185,500	\$ 362	\$	1,810,850
7.3	Strain Bus, Connectors & Insulators	2,700	LF	\$ 39.30	\$ 106,110	\$ 53.35	\$ 144,045	\$ 93	\$	250,155
7.4	Grounding System	32,600	LF	\$ 6.93	\$ 225,918	\$ 32.58	\$ 1,062,108	\$ 40	\$	1,288,026
7.5	Strain Bus Insulators - 345kV	24	EA	\$ 2,000	\$ 48,000	\$ 1,050	\$ 25,200	\$ 3,050	ć	73,200

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
7.6	Strain Bus Insulators - 230kV	36	EA	\$	1,400	\$ 50,400	\$ 750	\$ 27,000	\$ 2,150	\$	77,400
7.7	Strain Bus Insulators - 115kV		EA	\$	1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$	-
7.8	Low Voltage AC Station Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.9	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12	Utility Station Power	1	LS			\$ -	\$ 135,000	\$ 135,000	\$ 135,000	\$	135,000
7.13	Install new communication tower foundation	1	LS			\$ -	\$ 75,000	\$ 75,000	\$ 75,000	\$	75,000
7.14	Relocate existing communication tower	1	LS			\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$	50,000
7.15											
7.16											
7.17											
7.18											
7.19											
7.20											
7.21											
7.22											
7.23				1							
7.24											
7.25				1							
TOTAL - MISC	CITEMS					\$ 1,825,778		\$ 3,468,853		Ś	5,294,631
	etown Substation - Install					\$ 22,378,966		\$ 17,917,478		Ś	40,296,444
				_		\$ 22,378,900		3 17,317,478		3	40,230,444
8. MOB/DEMI	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1.0	LS	Ś	-	\$ -	\$ 402,964	\$ 402,964	\$ 402,964	Ś	402,964
0.1	•	1.0	LS	3		· -	\$ 402,964	\$ 402,964	\$ 402,964	,	402,964
	Project Management, Material Handling & Amenities			-							
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 2,048,268	\$ 2,048,268	\$ 2,048,268	\$	2,048,268
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 402,964	\$ 402,964	\$ 402,964	\$	402,964
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 402,964	\$ 402,964	\$ 402,964	\$	402,964
	Engineering										
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 3,223,716	\$ 3,223,716	\$ 3,223,716	\$	3,223,716
8.6	LiDAR	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 282,075	\$ 282,075	\$ 282,075	\$	282,075
	Testing & Commissioning							·	·		-
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	s	-	\$ -	\$ 1,007,411	\$ 1,007,411	\$ 1,007,411	\$	1,007,411
	Permitting and Additional Costs			1				, ,	, ,		
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	_	\$ -	\$ -	\$ -	\$ -	\$	_
8.11	Environmental Mitigation	_	LS	\$	-	\$ -	\$ -	š -	\$ -	\$	
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 120,889	\$ 120,889	\$ 120,889	\$	120,889
8.13	Real Estate Costs (New)	1	LS	\$		\$ -	\$ -	\$ 120,005	\$ -	\$	-
8.14	Real Estate Costs (New)	1	LS	\$		\$ -	\$ 792,000	\$ 792,000	\$ 792,000	\$	792,000
8.15	Legal Fees	-	LS	\$		\$ -	\$ 792,000	\$ 792,000	\$ 792,000	\$	792,000
8.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$		\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -	\$	-
	Anowance for runus used During Construction (Arodic)			\$	-	*	\$ - \$ -	T	•	Ś	
8.17	Color Tay on Materials	-	LS	\$		T	7	\$ - \$ -		\$	1,790,317
8.18	Sales Tax on Materials Fees for permits, including roadway, railroad, building or other local permits	1	LS LS	1>	1,790,317	\$ 1,790,317 \$ -	\$ -	\$ -	\$ 1,790,317 \$ 40,296		1,790,317 40,296
8.19											40.296

NextEra - T021 Enterprise Line - (Segment A) Total: \$ 2,639,089

NextEra - T021 Enterp	rise Line - (Se	NextEra - TO21 Enterprise Line - (Segment A)										
		Supply	Installation		Total							
F. Edic Substation - Install												
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,025	\$ 5,625	\$	7,650							
2. SUBSTATION FOUNDATIONS	\$	100,098	\$ 107,200	\$	207,298							
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$	88,800							
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$	280,000							
5. SMALL EQUIPTMENT / MATERIALS	\$	280,000	\$ 133,500	\$	413,500							
6. CONTROL HOUSE / PANELS	\$	173,850	\$ 98,850	\$	272,700							
7. MISC ITEMS	\$	339,357	\$ 507,880	\$	847,237							
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	91,178	\$ 430,726	\$	521,904							
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-							
SUBTOTAL:	\$	1,230,908	\$ 1,408,181	\$	2,639,089							
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-							
TOTAL:	\$	1,230,908	\$ 1,408,181	\$	2,639,089							

Descr	iptic	on of	Wo	rk:

Estimate Revision:

5

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supp	oly Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
F. Edic S	ubstation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$	27	\$ 2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	0	LF	\$	100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL					\$ 2,025		\$ 5,625		\$ 7,650
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	1	EA	\$	14,940	\$ 14,940	\$ 16,000	\$ 16,000	\$ 30,940	\$ 30,940
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundation	9	EA	\$	4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	
2.1k	Arrester Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,282
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
2.2	230kV									
2.2a	Circuit Breaker Foundations		EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations		EA	\$	44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2e	Switch Stand Foundations		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation		EA	\$ 3,735	\$ -			\$ 7,735	
2.2g	Bus Support 3ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2j	Instrument Transformer Stand Foundation		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2k 2.2m	Arrester Stand Foundations Wave Trap Stand Foundations		EA EA	\$ 3,735 \$ 3,735	\$ - \$ -	\$ 4,000 \$ 4,000	\$ - \$ -	\$ 7,735 \$ 7,735	
2.2m	Misc. Structure Foundations		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2p	Wisc. Structure Foundations		EA	,		,	Ÿ	Y	•
2.3	115kV								
2.3a	Circuit Breaker Foundations		EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations		EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ 16,434	\$ -		\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$ 16,434	\$ -	\$ 17,600		\$ 34,034	
2.3e	Switch Stand Foundations		EA	\$ 2,988	\$ -		•	\$ 6,188	
2.3f	Fuse Stand Foundations		EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3g 2.3h	Bus Support 3ph Foundations Bus Support 1 Ph Foundations		EA EA	\$ 2,988 \$ 2,988	\$ - \$ -	\$ 3,200 \$ 3,200		\$ 6,188 \$ 6,188	
2.3n 2.3j	Instrument Transformer Stand Foundations		EA	\$ 2,988	\$ - \$ -	\$ 3,200	\$ -	\$ 6,188	
2.3k	Arrester Stand Foundations		EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations		EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3n	Station Service Foundations		EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment		EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment		EA	\$ 74,700	\$ -	\$ 80,000	<u>'</u>	\$ 154,700	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad		EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation		EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation		EA	\$ 5,229	\$ -	,	\$ -	\$ 10,829	\$ -
2.6b	60' Lightning Mast Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c	50' Lightning Mast Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	 Fation foundations				\$ 100,098		\$ 107,200		\$ 207,298
	N STRUCTURES				+ = = = = = = = = = = = = = = = = = = =		7 201,200		¥ 20.720
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0		\$ 37,000	\$ -			\$ 74,000	
3.1b	Substation A-Frame Structures - Shared Column	0		\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1c	Switch Stands	1		\$ 14,800	\$ 14,800		' '	\$ 29,600	
3.1d 3.1e	Station Service Transformer Stand	0		\$ 14,800 \$ -	\$ - \$ -		\$ -	\$ 29,600	
3.1e 3.1f	Bus Support 3ph Bus Support 1 Ph	0		\$ -	\$ - \$ -		\$ - \$ -	\$ - \$ 7,400	\$ - \$ -
3.1g	Instrument Transformer Stand	9		\$ 3,700	\$ 16,650	,		\$ 7,400	
3.1g 3.1h	Arrester Stand	3		\$ 1,850	\$ 5,550			\$ 3,700	
3.1j	Wave Trap Stand	1		\$ 7,400	\$ 7,400			\$ 14,800	\$ 14,800
3.1k	Misc. Structures	0		\$ 6,475	\$ -		\$ -	\$ 12,950	
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone		EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column		EA		'	\$ 33,300		\$ 66,600	
3.2c	Switch Stands		EA	\$ 12,025		\$ 12,025		\$ 24,050	
3.2d	Station Service Transformer Stand		EA	\$ 12,025		\$ 12,025		\$ 24,050	
3.2e	Bus Support 3ph		EA	\$ -	\$ -			\$ -	
3.2f	Bus Support 1 Ph		EA	\$ 2,775		\$ 2,775		\$ 5,550	
3.2g	Instrument Transformer Stand		EA	\$ 1,295	\$ -	\$ 1,295		\$ 2,590	
3.2h	Arrester Stand		EA	\$ 1,295	\$ -	\$ 1,295		\$ 2,590	
3.2j	Wave Trap Stand		EA	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2k	Misc. Structures		EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone		EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column		EA	\$ 18,500	\$ -		\$ -	\$ 37,000	
3.3c	Switch Stands		EA	\$ 7,955	\$ -	\$ 7,955		\$ 15,910	
3.3d	Fuse Stand		EA	\$ 7,955			\$ -		\$ -
3.3e	Bus Support 3ph		EA	\$ 3,330	\$ -	\$ 3,330		\$ 6,660	
3.3f	Bus Support 1 Ph		EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
3.3g	Instrument Transformer Stand		EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3h	Arrester Stand		EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3j	Wave Trap Stand		EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures		EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	
					•			. ,	•
TOTAL - SUBS	TATION STRUCTURES				\$ 44,400		\$ 44,400		\$ 88,800
4. MAJOR EQU	UIPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	1	EA	\$ 200,000	\$ 200,000	\$ 80,000	\$ 80,000	\$ 280,000	\$ 280,000
4.1b	Capacitor Banks	0	EA	\$ -	\$ -		\$ -	\$ 80,000	
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	•
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	
4.2	230kV							, , , , , , , , , , , , , , , , , , , ,	
4.2a	Circuit Breakers		EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks		EA	\$ -	\$ -		\$ -	\$ 80,000	\$ -
				T	T	7 22,000	Ť	7 00,000	*
4.3	115kV								
4.3a	Circuit Breakers		EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks		EA	\$ -	\$ -		\$ -	\$ 60,000	
				Ť	Ť	7 22,000	Ť	7 00,000	T
TOTAL - MAJO	DR EQUIPTMENT				\$ 200,000		\$ 80,000		\$ 280,000
	IIPTMENT / MATERIALS				,				
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	1	EA	\$ 40,000	\$ 40,000	\$ 15,000	\$ 15,000	\$ 55,000	\$ 55,000
5.1b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 35,000	\$ 35,000	\$ 17,500	\$ 17,500	\$ 52,500	\$ 52,500
5.1c	VT'S	3		\$ 25,000	\$ 75,000		\$ 36,000	\$ 37,000	
5.1d	CT'S	3	EA	\$ 13,000	\$ 39,000			\$ 21,000	
5.1e	CCVT'S	3		\$ 13,000	\$ 39,000		· , , ,	\$ 21,000	
5.1f	Arresters	6		\$ 6,500	\$ 39,000			\$ 8,000	
5.1g	Wave Traps	1		\$ 13,000	\$ 13,000		\$ 8,000	\$ 21,000	
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000		\$ 250,000	
5.1j	Station Service Transformers		Er.	Ç 200,000	*	\$ 30,000	<u> </u>	Ç 250,000	*
F 2	230kV								
5.2									
				4 25 000		45.000	<u> </u>	4 50.000	•
5.2a	Line Switches - 3ph w/ motor operator		EA	\$ 35,000	\$ -		\$ -	\$ 50,000	
5.2b	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator		EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2b 5.2c	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S		EA EA	\$ 30,000 \$ 13,000	\$ - \$ -	\$ 17,500 \$ 8,000	\$ - \$ -	\$ 47,500 \$ 21,000	\$ - \$ -
5.2b 5.2c 5.2d	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S		EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000	\$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000	\$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000	\$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S		EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000	\$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000	\$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters		EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000	\$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000	\$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps		EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters		EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000	\$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000	\$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps		EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers		EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers		EA EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator		EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator		EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ - \$ - \$ - \$ 33,000 \$ 28,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ - \$ - \$ 15,000 \$ 17,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ - \$ 5 48,000 \$ 45,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S		EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000 \$ - \$ - \$ 33,000 \$ 28,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ - \$ - \$ 15,000 \$ 17,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ - \$ 48,000 \$ 45,500 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c 5.3c 5.3d	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CC'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CT'S		EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ - \$ 28,000 \$ 33,000 \$ 28,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ - \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ - \$ 48,000 \$ 45,500 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3b 5.3c 5.3d 5.3e	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S		EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 13,000 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 15,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 16,000 \$ 16,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ - \$ 21,000 \$ 48,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c 5.3d 5.3c 5.3d 5.3e 5.3f	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters		EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 28,000 \$ 33,000 \$ 28,000 \$ 33,000 \$ 34,20	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 7 \$ 7 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 16,000 \$ 11,000 \$ 12,000 \$ 12,000 \$ - \$ - \$ 48,000 \$ 45,500 \$ 21,000 \$ 21,000 \$ 9,420	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c 5.3d 5.3e 5.3f 5.3g 5.3g	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps		EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 28,000 \$ 33,000 \$ 28,000 \$ 13,000 \$ 3,420 \$ 3,420	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 15,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c 5.3d 5.3c 5.3d 5.3e 5.3f	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters		EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 28,000 \$ 33,000 \$ 28,000 \$ 33,000 \$ 3420	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 15,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 1,000 \$ 1,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ - \$ 48,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 9,420 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

							Labor & Equipment	Labor & Equipment			
Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate	T	TOTAL
TOTAL - SMALI	EQUIPTMENT / MATERIALS					\$ 280,000		\$ 133,500		\$	413,500
6. CONTROL H	DUSE / PANELS / GENERATOR										
6.1	CONTROL HOUSE	0	EA	\$	551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$	-
6.2	Protection and Telecom Equipment Panels	3	EA	\$	35,000	\$ 105,000	\$ 10,000	\$ 30,000	\$ 45,000	\$	135,000
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4	Control Cables	1	LS	\$	68,850	\$ 68,850	\$ 68,850	\$ 68,850	\$ 137,700	\$	137,700
6.5	SCADA and Communications	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.7	DC Distribution System	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.8	Security	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.9	Fire Alarm	0	EA	\$	7,500		\$ 7,500	\$ -	\$ 15,000	\$	-
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$	-
										-	
	ROL HOUSE / PANELS / GENERATOR					\$ 173,850		\$ 98,850		\$	272,700
7. MISC ITEMS									4		
7.1	Conduit & Cable Trench System	800	LF	\$	185.00			\$ 136,000	\$ 355	\$	284,000
7.2	Rigid Bus, Fittings & Insulators	0	L.S.	\$	75,042.00	\$ -	\$ 142,260.00	\$ -	\$ 217,302	\$	-
7.3	Strain Bus, Connectors & Insulators	2,500	LF	\$	39.30		\$ 53.35		\$ 93		231,625
7.4	Grounding System	1	L.S.	\$	10,395.00				\$ 83,700		83,700
7.5	Strain Bus Insulators - 345kV	24	EA	\$	2,000				\$ 3,050		73,200
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400		\$ 750		\$ 2,150		-
7.7	Strain Bus Insulators - 115kV	0	EA	\$	1,000		\$ 550		\$ 1,550		-
7.8	Low Voltage AC Station Service	0	LS	\$	50,000		\$ 75,000		\$ 125,000		-
7.9	SSVT Service	0	LS	\$	-,		\$ 45,000		\$ 90,000		
7.10	Control Conduits from Trench to Equipment	1	LS	\$,	,	\$ 70,000	\$ 70,000	\$ 84,000	\$	84,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	20,712	\$ 20,712	\$ 70,000	\$ 70,000	\$ 90,712	\$	90,712
7.12											
7.13											
7.14											
7.15				-							
7.16											
7.17											
7.18 7.19				-							
7.20 7.21				_							
7.21											
7.22											
7.23				1							
7.25											
TOTAL - MISC	ITEMS					\$ 339,357		\$ 507,880		Ś	847,237
										s	
	ubstation - Install					\$ 1,139,730		\$ 977,455		>	2,117,185
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization			1.						.	
8.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 21,172	\$ 21,172	\$ 21,172	\$	21,172
	Project Management, Material Handling & Amenities			-							
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 107,617	\$ 107,617	\$ 107,617	\$	107,617
8.3	Utility PM and Project Oversite	1	LS	+		\$ -	\$ 21,172	\$ 21,172	\$ 21,172	ć	21,172
8.4	ch a lat 5 this 6	4	LS	4		ý - Ġ _	\$ 21,172 \$ 21,172				21,172
0.4	Site Accommodation, Facilities, Storage Engineering	1	IJ	>		· -	y 21,172	y 21,1/2	γ 21,1/2		
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 169,375	\$ 169,375	\$ 169,375	Ś	169,375
8.6	LiDAR	-	LS	\$				\$ -	\$ -		-
8.7	Geotech	4		\$			\$ 3,500				14,000
8.8	Surveying/Staking	1	Site	\$			\$ 14,820				14,820
5.5	Testing & Commissioning		2,60	+*			. 1.,520	. 1,,520	. 1,520	r –	
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 52,930	\$ 52,930	\$ 52,930	\$	52,930
	Permitting and Additional Costs	-		1					. 22,330		
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	
							*	•	•		

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Mate	erial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipm Cost	ent	Total Unit Rate	TOTAL
8.11	Environmental Mitigation		LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 6,352	\$ 6	,352	\$ 6,352	\$ 6,352
8.13	Real Estate Costs (New)	1	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.15	Legal Fees	٠	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.17		-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	91,178	\$	91,178	\$ -	\$	-	\$ 91,178	\$ 91,178
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 2,117	\$ 2	,117	\$ 2,117	\$ 2,117
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	91,178		\$ 430	,726		\$ 521,904

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NextEra - T021 Enterprise Line - (Segment A) G. Edic Substation - Removal Total: \$

41,840

NextEra - T021 Enterpri	NextEra - T021 Enterprise Line - (Segment A)												
		Supply		Installation		Total							
G. Edic Substation - Removal													
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$		\$	-	\$	-							
2. SUBSTATION FOUNDATIONS	\$	-	\$	14,200	\$	14,200							
3. SUBSTATION STRUCTURES	\$	-	\$	6,750	\$	6,750							
4. MAJOR EQUIPTMENT	\$	-	\$	-	\$	-							
5. SMALL EQUIPTMENT / MATERIALS	\$		\$	4,500	\$	4,500							
6. CONTROL HOUSE / PANELS	\$		\$	-	\$	-							
7. MISC ITEMS	\$	-	\$	10,500	\$	10,500							
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$	5,890	\$	5,890							
CONTRACTOR MARK-UP (OH&P)	\$		\$	-	\$	-							
SUBTOTAL:	\$		\$	41,840	\$	41,840							
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-							
TOTAL:	\$	-	\$	41,840	\$	41,840							

		on		

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
G. Edic S	ubstation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 14,200	\$ 14,200	\$ 14,200	\$ 14,200
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -		\$ -	\$ -		\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV			_	4		4	4	4
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000		\$ 22,000	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -		\$ 11,000		\$ 11,000	
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	,	\$ -	\$ 5,200	•
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

2-10 Servanent Touristerant Stanf Functions	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.20 More Properties		Bus Support 1 Ph Foundations				\$ -				
2.29 Wash Tour Stand Processing					•	·				
1.320						'				
230 230 231 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232 232						т				
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00		Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.29 Seal Browlet Foodblers	2.2p									
2.29 Seal Browlet Foodblers	2.2	115bV								
2.38 Consected table Prescriptions 0			0	FA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2 28 Calsson De Foundations (for De A farmer et - steard above)										
2.34 Search End Frontations 9 EA 5 5 5 5 5 5 5 5 5							•			
2.74 Instruction				EA		\$ -			\$ -	
2 28 to Support By Fondations 0 16 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.39 to Support IP Fromations	2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.31 Instrument Transformer Stand Foundations 0 6A 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.88 Amonter Stand Foundations 0 EA 5 5 5 5 5 5 5 5 5	2.3h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2-25m Wave Trap Stard Foundations 0 EA 5 5 5 5 5 5 5 5 5						<u>'</u>		· .	·	
Sation Server Foundations						7		'		•
Accordance Control C										
2.4 Transformer Foundations						т				•
2.49 345-2304 Transformer Foundation w/ 01 of Containment	2.3p	MISC. STRUCTURE FOUNDATIONS	0	EA	> -	-	\$ -	> -	> -	> -
2.49 345-2304 Transformer Foundation w/ 01 of Containment	2.4	Transformer Foundations								
2.40 345-1354V Transformer Foundation of Q Containment			0	FΔ	¢ .	¢ -	¢ -	¢ .	¢ _	¢ .
2.4c					'	'		•		
2.4 1154/69V Transformer Foundation of Oil Containment		·								
2.5 Control House Foundations / Pad						'		'		
2.5a Control House Fad		,	-				,		•	
2.5 Contractor Foundation	2.5	Control House Foundations / Pad								
2.6 Uphtning Mast Foundations	2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6a	2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6a										
2.6b					_	_	1	_	1	4
Company Comp		70' Lightning Mast Foundation								
TOTAL - SUBSTATION FOUNDATIONS							1			
3.19	2.00		U	LA	· -	· -	· -	· -	· -	, .
3.19	TOTAL - SUBST	ATION FOUNDATIONS				\$ -		\$ 14.200		\$ 14,200
3.1 345kV						*		Ţ		Ţ
3.1b Substation A-Frame Structures - Shared Column O EA S S S S S S S S S										
3.1c Switch Stands	3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d Station Service Transformer Stand	3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.16		Switch Stands				\$ -	\$ -	\$ -	\$ -	\$ -
3.1f Bus Support 1 Ph 3 EA \$ - \$ - \$ - \$ 2,250 \$ 6,750 \$ 2,250 \$ 6,75 3.1g Instrument Transformer Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$		Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g Instrument Transformer Stand 0 EA \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$										
3.1h Arrester Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$					•	т				
3.1 Wave Trap Stand								'	•	
3.1k Misc. Structures						<u>'</u>				
3.2 230kV 3.2a Substation A-Frame Structures - Stand alone 3.2b Substation A-Frame Structures - Shared Column 5.2b Substation A-Frame Structures - Shared Column 6.2c Switch Stands 7.2c Switch Stands 7.						'		•		
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 9 5 - \$ 7 \$ - \$ 9 \$ - \$ 9 \$ - \$ - \$ - \$ - \$ - \$ -	3.18	INIDO. SILUCTURES	0	LA.	-	-	-	-	-	-
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 9 5 - \$ 7 \$ - \$ 9 \$ - \$ 9 \$ - \$ - \$ - \$ - \$ - \$ -	3.2	230kV								
3.2b Substation A-Frame Structures - Shared Column 0 EA \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 9,750 \$ - \$ 9,750 \$ - \$ 9,750 \$ - \$ 9,750 \$ - \$ 9,750 \$ - \$ 9,750 \$ - \$ 9,750 \$ - \$ 9,750 \$ - \$ 9,750 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2d Station Service Transformer Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			0	EA	\$ -	\$ -		\$ -		
3.2f Bus Support 1 Ph 0 EA \$ - \$ 2,250 \$ - \$ 2,250 \$ - \$ 2,250 \$ - \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
3.2g Instrument Transformer Stand 0 EA \$ - \$ 1,050 \$ - \$ 1,050 \$ - 3.2h Arrester Stand 0 EA \$ - \$ 1,050 \$ - \$ 1,050 \$ - 3.2j Wave Trap Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <										
3.2h Arrester Stand 0 EA \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ 1,050 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <										
3.2j Wave Trap Stand 0 EA \$ - \$ - \$ 4,500 \$ - \$ 4,500 \$ - 3.2k Misc. Structures 0 EA \$ - \$ - \$ - \$ - \$ - \$ -						•				
3.2k Misc. Structures 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
		·								
33 115kV	3.2K	INISC. STRUCTURES	0	EA	, -	-	, -	, -	> -	-
	3 2	115kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION STRUCTURES				\$ -		\$ 6,750		\$ 6,750
4. MAJOR EQU									
	345kV							<u> </u>	
	Circuit Breakers	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
	230kV								
	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	· · · · · · · · · · · · · · · · · · ·	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
	early.								
	115kV	_		4	4	4			4
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL MANIO	R EQUIPTMENT						A		A
	•				\$ -		\$ -		\$ -
	PTMENT / MATERIALS								
	345kV	0	F.A.	ć	ć	ć 5.500	ć	ć 5.500	<u> </u>
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -		\$ - \$ -	\$ 5,500	
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ - \$ -	\$ 5,500	7	\$ 5,500	
	VT'S	0	EA	\$ -	'	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -
5.1d 5.1e	CT'S CCVT'S	0	EA EA	\$ -	7	-		\$ - \$ 2,500	\$ - \$ -
5.1e	CCV13	U	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	, -
5.1f	Arresters	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Station Service Transformers	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
5.1j	Station Service Hunstonners		15.	*	*	*	Ť	Ÿ	•
,									
5.2	230kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	\$ -
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	0	EA	\$ -	\$ -		\$ -	\$ 1,500	\$ -
	Arresters	0	EA	\$ -	\$ -		\$ -	\$ 2,500	
5.2g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	
	VT'S	0		\$ -			\$ -		\$ -
	CT'S	0	EA	\$ -			\$ -		\$ -
	CCVT'S	0		\$ -	\$ -		\$ -		\$ -
	Arresters	0	EA	\$ -		\$ 1,500		\$ 1,500	
	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
	Station Service Transformers	0		\$ -			\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	EQUIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
6. CONTROL H	DUSE / PANELS / GENERATOR								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.20	ocheruco.	<u> </u>	Ε,	Ť	· ·	·	Ť	Ÿ	*
TOTAL - CONTI	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS					,		Ų.		,
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	¢ .
	Rigid Bus, Fittings & Insulators	1	LS	\$ -	\$ -	\$ 10,500.00	\$ 10,500	\$ 10,500	
7.2	Strain Bus, Connectors & Insulators	0	EA EA	\$ -	\$ -		\$ 10,500	\$ 10,500	
7.4	Grounding System	0	EA EA	\$ -	\$ - \$ -	\$ 39.35		\$ 42,000	
7.4	Grounding system	U	EA	-	· -	ع 42,000.00	· -	ş 42,000	· -
7.5				+					
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 10,500		\$ 10,500
G. Edic S	ubstation - Removal				\$ -		\$ 35,950		\$ 35,950
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 360	\$ 360	\$ 360	\$ 360
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 1,827	\$ 1,827	\$ 1,827	\$ 1,827
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 360	\$ 360	\$ 360	\$ 360
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 360		\$ 360	
	Engineering			ļ *	· -	300	Ç 300	Ç 300	7 300
	Design Engineering	1	LS	\$ -	\$ -	\$ 2,876	\$ 2,876	\$ 2,876	\$ 2,876
8.6	LiDAR	-	LS	\$ -	\$ -	\$ 2,870	\$ 2,870	\$ -	\$ 2,876
8.7	Geotech	-	EA EA	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500	
	Surveying/Staking	-	Site	\$ -	\$ -		\$ -	\$ 3,500	
	Testing & Commissioning	-	Jile	-	-	252	-	y 252	· -
8.9	Testing & Commissioning Testing & Commissioning of T-Line and Equipment		LS	\$ -	\$ -	\$ 899	\$ -	\$ 899	\$ -
8.9		-	LS	-	· -	φ 899 	· -	ş 899	· -
0.40	Permitting and Additional Costs		1.0		\$ -	ć	·	\$ -	<u>, </u>
	Environmental Licensing & Permitting Costs	-	LS	\$ -		\$ -	\$ -	т	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -		\$ 108	·	\$ 108
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	•	\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 36		\$ 36	
TOTAL MACE!	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 5,890		\$ 5,890

NextEra - T021 Enterprise Line - (Segment A)

H. New Scotland Substation - Install

Estimate Revision: 5 Total: \$ 8,384,335

NextEra - T021 Enterprise Lin	e - (Segi	ment A)		
		Supply	Installation	Total
H. New Scotland Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	30,750	\$ 233,063	\$ 263,813
2. SUBSTATION FOUNDATIONS	\$	498,996	\$ 534,400	\$ 1,033,396
3. SUBSTATION STRUCTURES	\$	240,500	\$ 240,500	\$ 481,000
4. MAJOR EQUIPTMENT	\$	1,000,000	\$ 400,000	\$ 1,400,000
5. SMALL EQUIPTMENT / MATERIALS	\$	369,500	\$ 188,000	\$ 557,500
6. CONTROL HOUSE / PANELS	\$	749,150	\$ 390,400	\$ 1,139,550
7. MISC ITEMS	\$	897,304	\$ 968,110	\$ 1,865,414
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	302,896	\$ 1,340,767	\$ 1,643,663
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	4,089,096	\$ 4,295,239	\$ 8,384,335
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	4,089,096	\$ 4,295,239	\$ 8,384,335

Description of Work:

	·	Estimated Quantity	Unit of Measure	Material Su	pply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	тот	ſAL
H. New S	cotland Substation - Install										
1. SITE PREP/ G	RADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0.9	ACRES	\$	-	\$ -	\$ 203,000	\$ 190,313	\$ 203,000	\$	190,313
1.2	Station stone within substation fence.	250	CY	\$	27	\$ 6,750	\$ 75	\$ 18,750	\$ 102	\$	25,500
1.3	Substation Fence	240	LF	\$	100	\$ 24,000	\$ 100	\$ 24,000	\$ 200	\$	48,000
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$	-
1.5											
1.6											
1.7											
1.8											
1.9											
1.10											
1.11											
1.12											
1.13											
1.14											
1.15											
TOTAL - SITE PF	REP/ GRADING/ FENCING / CIVIL					\$ 30,750		\$ 233,063		\$	263,813
2. SUBSTATION	FOUNDATIONS										
2.1	345kV										
2.1a	Circuit Breaker Foundations	5	EA	\$	14,940	\$ 74,700	\$ 16,000	\$ 80,000	\$ 30,940	\$	154,700
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$	-
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$	26,145	\$ 104,580	\$ 28,000	\$ 112,000	\$ 54,145	\$	216,580
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$	-
2.1e	Switch Stand Foundations	18	EA	\$	4,482	\$ 80,676	\$ 4,800	\$ 86,400	\$ 9,282	\$	167,076
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1h	Bus Support 1 Ph Foundations	32	EA	\$	4,482	\$ 143,424	\$ 4,800	\$ 153,600	\$ 9,282	\$	297,024
2.1j	Instrument Transformer Stand Foundations	15	EA	\$	4,482	\$ 67,230	\$ 4,800	\$ 72,000	\$ 9,282	\$	139,230
2.1k	Arrester Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$	27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$	9,282
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1p											
	230kV										
	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$	-
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000		\$ 92,820		-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000		\$ 46,410		-
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$	-
2.2e	Switch Stand Foundations	0	EA	\$	3,735	\$ -	\$ 4,000	\$ -	\$ 7,735		-
2.2f	Station Service Transformer Stand Foundation	0	EA	\$	3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$	-

Column	Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2	2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.20	2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2-72 No. No. To proceed translations 0 FA 5 178 5 5 4,000 5 5 7,785 5 5 5 5 5 5 5 5 5										
2.20 Min. Standarder Min. Standarder 0 FA 5 5 5 5 5 5 5 5 5										
230								·		
Second Service Condition		Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3.0 Carsat transer transfators 0 FA \$ 3.279 \$ 1 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 5 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000	2.2p									
2-30 Creat transfer Foundations 0 EA 5 3.278 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5.000 5 5 5 5 5 5 5 5 5	2.3	115kV								
2.70 Capacita few formations			0	FA	\$ 5,229	\$ -	\$ 5.600	\$ -	\$ 10.829	\$ -
2.24										
2-be Section Stand Foundations 0 FA \$ 2,088 \$ \$ \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	2.3c		0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	\$ -
2.48 Investigation	2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.49					, , , , , , , , , , , , , , , , , , , ,	\$ -	,	\$ -	,	
2.36						\$ -				
2.3 Instrument Transformer Stand Foundations							,	•	. , , ,	•
2.8										
2.3m Wave Trap Stand Foundations 0 EA \$ 2,088 \$ \$ 3,200 \$ \$ 5,88 \$ \$ \$ \$ \$ \$ \$ \$ \$									7 -/	
2.39 Station Service Foundations 0 EA S S S S S S S S S						·				
2.48		· ·				'			,	
2.4 Transformer Foundations						т				
2.48 345-230W Transformer foundation w/ Oil Containment 0 EA 5 79,110 5 5 106,000 5 5 5 201,110 5	2.56	I Structure i suriousis			<u> </u>	<u> </u>	<u> </u>	Ŷ	Ť	Ť
240 345-115W Transformer foundation w/ Oil Containment	2.4	Transformer Foundations								
2.46 2308/-115M/Transformer Foundation w/ Oil Containment		345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.6	2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.5 Control House Foundations Fad	2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5										
2-50 Generator Foundation								4		•
2.6 Lightning Mast Foundations										-
2	2.50	Generator Foundation	-	EA	\$ 10,000	ş -	\$ 17,000	· -	\$ 33,000	, -
2	2.6	Lightning Mast Foundations								
2.66			2	EA	\$ 5,229	\$ 10.458	\$ 5.600	\$ 11,200	\$ 10.829	\$ 21,658
TOTAL - SUBSTATION FOUNDATIONS \$ 498,996 \$ 534,400 \$ 1,033										
3.18 Substation A-Frame Structures - Stand alone 1	2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.18 Substation A-Frame Structures - Stand alone 1										
3.11 SaskV						\$ 498,996		\$ 534,400		\$ 1,033,396
3.1a Substation A-Frame Structures - Stand alone 1 EA S 37,000 S 37,000 S 37,000 S 74,000 S 74,000 S 37,000 S 37										
3.1b Substation A-Frame Structures - Shared Column 0 EA \$ 37,000 \$ -										
3.1c Switch Stands 3 EA \$ 14,800 \$ 44,400 \$ 29,600 \$ 88										
Station Service Transformer Stand 0 EA 5 14,800 5 - 5 5 29,600 5 3.1e Bus Support 3ph 0 EA 5 - 5 - 5 - 5 - 5 - 5 3.7e 5 3.7e 3.7						т				
3.1e Bus Support 3ph 0 EA \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ \$										
3.1f Bus Support 1 Ph 32 EA \$ 3,700 \$ 118,400 \$ 3,700 \$ 118,400 \$ 7,400 \$ 236									. , , ,	
3.1g Instrument Transformer Stand 15 EA \$ 1,850 \$ 27,750 \$ 1,850 \$ 27,750 \$ 3,700 \$ 55 3.1h Arrester Stand 3 EA \$ 1,850 \$ 5,550 \$ 1,850 \$ 5,550 \$ 3,700 \$ 11 3.1j Wave Trap Stand 1 EA \$ 7,400 \$ 7,400 \$ 7,400 \$ 7,400 \$ 14,800 \$ 14,800 3.1k Lightning Masts - 70' 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$ 1 3.2 230kV									_	
3.1h Arrester Stand 3 EA \$ 1,850 \$ 5,550 \$ 1,850 \$ 5,550 \$ 3,700 \$ 11 3.1j Wave Trap Stand 1 EA \$ 7,400 \$ 7,400 \$ 7,400 \$ 7,400 \$ 14,800 \$ 14 3.1k Lightning Masts - 70' 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$ 3.2 230kV										
3.1k Lightning Masts - 70' C EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$ 3.2										
3.2 230kV 3.2a Substation A-Frame Structures - Stand alone 3.2b Substation A-Frame Structures - Shared Column 5.2 Switch Stands 5.3 Station Service Transformer Stand 6. Station Service Transformer Stand 7. Station Service Transformer Stand 8. Station Service Transformer Stand 9. Stati		Wave Trap Stand								
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$ 66,600 \$ 3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$ 66,600 \$ 3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ 3.2f Bus Support 1Ph 0 EA \$ 2,775 \$ - \$ 2,775 \$ - \$ 3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 5,550 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 3.2h Arrester Stand 0 EA \$ 5,550 \$ - \$ 1,100 \$	3.1k	Lightning Masts - 70'	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$ 66,600 \$ 3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$ 66,600 \$ 3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ 3.2f Bus Support 1Ph 0 EA \$ 2,775 \$ - \$ 2,775 \$ - \$ 3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 5,550 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 3.2h Arrester Stand 0 EA \$ 5,550 \$ - \$ 1,100 \$										
3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ \$ \$ \$ \$ \$ \$ \$										
3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ 3.2f Bus Support 1Ph 0 EA \$ 2,775 \$ - \$ 2,775 \$ - \$ 3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 2,590 \$ 3.2h Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 11,100 \$					· /					
3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ -										
3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 5,550 \$ 3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 2,590 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 2,590 \$ 3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 1,100 \$										
3.2f Bus Support 1 Ph 0 EA \$ 2,775 \$ - \$ 5,550 \$ 3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 11,100 \$										
3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 1,959 \$ - \$ 2,590 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 11,100 \$										
3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 11,100 \$										
3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 11,100 \$										
										•
					.,		.,		,	

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	Il Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV									
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$		\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$	3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$	1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$	740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$	740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$	3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
TOTAL - SUBST	TATION STRUCTURES					\$ 240,500		\$ 240,500		\$ 481,000
4. MAJOR EQU	IPTMENT									
4.1	345kV									
4.1a	Circuit Breakers	5	EA	\$	200,000	\$ 1,000,000	\$ 80,000	\$ 400,000	\$ 280,000	\$ 1,400,000
4.1b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV									
4.2a	Circuit Breakers	0		\$	115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV									
4.3a	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
	R EQUIPTMENT					\$ 1,000,000		\$ 400,000		\$ 1,400,000
	IPTMENT / MATERIALS									
5.1	345kV									
5.1a	Line Switches - 3ph w/ motor operator	1		\$	40,000	\$ 40,000	\$ 15,000	\$ 15,000	\$ 55,000	\$ 55,000
5.1b	Disconnect Switches - 3ph w/ manual operator	3		\$,	\$ 105,000	\$ 17,500	\$ 52,500	\$ 52,500	\$ 157,500
5.1c	VT'S	3		\$	25,000		\$ 12,000		\$ 37,000	\$ 111,000
5.1d	CT'S	3	EA	\$	13,000		\$ 8,000		\$ 21,000	
5.1e	CCVT'S	6		\$		\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.1f	Arresters	3		\$	6,500			\$ 4,500		\$ 24,000
5.1g	Wave Traps	1	EA	\$	13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
5.1h	Station Service Transformers	0	EA	\$	200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j										
F 2	22014									
5.2 5.2a	230kV	0	EA	\$	35,000	\$ -	\$ 15,000	ċ	\$ 50,000	\$ -
	Line Switches - 3ph w/ motor operator	0		\$				\$ - \$ -	· · · · · · · · · · · · · · · · · · ·	•
5.2b 5.2c	Disconnect Switches - 3ph w/ manual operator VT'S	0		\$		\$ - \$ -	\$ 17,500 \$ 8,000	\$ -	\$ 47,500 \$ 21,000	\$ - \$ -
5.2d	CT'S	0	EA	\$	13,000		\$ 8,000	·	\$ 21,000	
5.2e	CCVT'S	0		\$		\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2e 5.2f	Arresters	0		\$		\$ - \$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2g 5.2h	Station Service Transformers	0		\$		\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2j	Station Service Hundronners	0		1		-	* -	* 1	· ·	* *
الم.در				1	+					
5.3	115kV									
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$	33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0		\$	28,000		\$ 17,500	\$ -	\$ 45,500	•
	VT'S	0		\$	13,000		\$ 8,000		\$ 21,000	
5.3d	CT'S	0		\$	13,000		\$ 8,000		\$ 21,000	
5.3e	CCVT'S	0		\$	8,000		\$ 8,000		\$ 16,000	
5.3f	Arresters	0		\$	3,420		\$ 6,000		\$ 9,420	
5.3g	Wave Traps	0		\$			\$ -		\$ -	\$ -
5.3h	Station Service Transformers	0		\$		•	•	\$ -		\$ -
5.3j	Fuses	0		\$				\$ -	\$ -	\$ -
				1			•			
TOTAL - SMAL	L EQUIPTMENT / MATERIALS					\$ 369,500		\$ 188,000		\$ 557,500
	OUSE / PANELS / GENERATOR					,		,		
				-						

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	тот	AL
6.1	CONTROL HOUSE	1	EA	\$	243,750	\$ 243,750	\$ 42,500	\$ 42,500	\$ 286,250	\$	286,250
6.2	Protection and Telecom Equipment Panels	7	EA	\$	35,000	\$ 245,000	\$ 12,500	\$ 87,500	\$ 47,500	\$	332,500
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4	Control Cables	1	LS	\$	260,400	\$ 260,400	\$ 260,400	\$ 260,400	\$ 520,800	\$	520,800
6.5	SCADA and Communications	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.7	DC Distribution System	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
	Security	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
	Fire Alarm	0		\$	7,500	•	\$ 7,500	\$ -	\$ 15,000	\$	-
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	Ş	-
TOTAL - CONTR	OL HOUSE / PANELS / GENERATOR					\$ 749,150		\$ 390,400		\$ 1	1,139,550
7. MISC ITEMS	oznosz, miesy odniemion					7 745,150		2 350,400		, 1	,139,330
	Conduit & Cable Trench System	2,500.0	LF	\$	185.00	\$ 462,500	\$ 170.00	\$ 425,000	\$ 355	\$	887,500
				1							
	Rigid Bus, Fittings & Insulators	700.0	LF	\$		\$ 87,549			\$ 362		253,519
7.3	Strain Bus, Connectors & Insulators	200.0	LF	\$	39.30		\$ 53.35			\$	18,530
	Grounding System	1,500.0	LF	\$	6.93		\$ 32.58	-			59,265
	Strain Bus Insulators - 345kV	12	EA	\$	2,000						36,600
	Strain Bus Insulators - 230kV	0	EA	\$	1,400 1,000		\$ 750 \$ 550		\$ 2,150 \$ 1,550		-
	Strain Bus Insulators - 115kV	0		\$		\$ - \$ -	\$ 75,000	\$ - \$ -	\$ 1,550 \$ 125,000	\$	
	Low Voltage AC Station Service SSVT Service	0		\$	45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	Ś	
	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000		250,000
	Misc. Materials (Above and Below Ground)	1	LS	Ś	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000		360,000
7.12	, , , , , , , , , , , , , , , , , , , ,	_ _		+*		7 200,000	7 200,000	7 200,000	7 553,555		
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20 7.21				-							
7.21											
7.23											
7.24											
7.25											
TOTAL - MISC I	TEMS					\$ 897,304		\$ 968,110		\$ 1	1,865,414
H. New S	cotland Substation - Install					\$ 3,786,200		\$ 2,954,473			5,740,673
8. MOB/DEMOI	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					ÿ 3),700,200		2,55 1, 175		Ψ	,, ,,,,,,
	Contractor Mobilization / Demobilization	4.0	1.0	-		ė	¢ 67.407	¢ 67.407	¢ 67.407	ė	67 407
	Mob / Demob Project Management Material Handling & Amonities	1.0	LS	\$	-	\$ -	\$ 67,407	\$ 67,407	\$ 67,407	\$	67,407
	Project Management, Material Handling & Amenities			1							
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 342,628	\$ 342,628	\$ 342,628	\$	342,628
8.3	Utility PM and Project Oversite	1	LS	1		\$ -	\$ 67,407	\$ 67,407	\$ 67,407	\$	67,407
	Site Accommodation, Facilities, Storage	1		\$			\$ 67,407				67,407
	Engineering		-	1		•			. ,,,,,,,,		
	Design Engineering	1	LS	\$	-	\$ -	\$ 539,254	\$ 539,254	\$ 539,254	\$	539,254
	LiDAR	-	LS	\$				\$ -		\$	
	Geotech	4		\$			\$ 3,500				14,000
	Surveying/Staking	1	Site	\$	-	\$ -	\$ 47,185	\$ 47,185	\$ 47,185	\$	47,185
	Testing & Commissioning										
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 168,517	\$ 168,517	\$ 168,517	\$	168,517

Item	Item Description	Estimated Quantity	Unit of Measure	Material Su	oply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 20,222	\$ 20,222	\$ 20,222	\$ 20,222
8.13	Real Estate Costs (New)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	302,896	\$ 302,896	\$ -	\$ -	\$ 302,896	\$ 302,896
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 6,741	\$ 6,741	\$ 6,741	\$ 6,741
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 302,896		\$ 1,340,767		\$ 1,643,663

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NextEra - T021 Enterprise Line - (Segment A) I. New Scotland Substation - Removal Total: \$ 169,052

NextEra - T021 Enterprise Lin	e - (Segment A)		
	Supply	Installation	Total
I. New Scotland Substation - Removal			
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	\$ 30,000	\$ 30,000
2. SUBSTATION FOUNDATIONS	\$ -	\$ 57,200	\$ 57,200
3. SUBSTATION STRUCTURES	\$ -	\$ 27,000	\$ 27,000
4. MAJOR EQUIPTMENT	\$ -	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$ 7,000	\$ 7,000
6. CONTROL HOUSE / PANELS	\$ -	\$ -	\$ -
7. MISC ITEMS	\$ -	\$ 21,000	\$ 21,000
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -	\$ 26,852	\$ 26,852
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ -	\$ 169,052	\$ 169,052
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ -	\$ 169,052	\$ 169,052

Description of Work:	D	es	cr	ıpt	:10	n o	t W	or	k:
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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
I. New S	cotland Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	200	LF	\$ -	\$ -	\$ 150	\$ 30,000	\$ 150	\$ 30,000
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ 30,000		\$ 30,000
	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	2	EA	\$ -	\$ -	,	\$ 28,400	\$ 14,200	
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	12	EA	\$ -	\$ -	\$ 2,400	\$ 28,800	\$ 2,400	\$ 28,800
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	_	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -		\$ -	\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	, ,	\$ -	\$ 22,000	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	š -	\$ -	\$ 11,000		\$ 11,000	
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Fuse Stand Foundations	0	EA	š -	\$ -	\$ -	\$ -	\$ 5,200	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	š -	\$ -	\$ -	\$ -	\$ -	\$ -
	pas support spiri suridations		LA	17			-	· ·	· ·

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
2.2m	Wave Trap Stand Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	aarily.								
2.3 2.3a	115kV Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3a	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -		\$ -	\$ 5,200	•
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		-		7	*	,	7	*	*
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations				_	4		1	
2.6a 2.6b	70' Lightning Mast Foundation	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.60		0	EA	, -	\$ -	ş -	\$ -	\$ -	-
TOTAL - SUBS	TATION FOUNDATIONS				\$ -		\$ 57,200		\$ 57,200
	N STRUCTURES				-		Ţ 0.7200		Ţ 0.7200
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph Instrument Transformer Stand	12	EA EA	\$ -	\$ - \$ -	\$ 2,250	\$ 27,000	\$ 2,250	\$ 27,000
3.1g 3.1h	Arrester Stand	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.1n 3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				1					
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ 27,000		\$ 27,000	
3.2c	Switch Stands	0		\$ -	\$ -	\$ 9,750		\$ 9,750	
3.2d	Fuse Stand	0		\$ -	\$ -		\$ -	\$ -	
3.2e	Bus Support 3ph	0		\$ -	\$ -		\$ -		\$ -
3.2f	Bus Support 1 Ph	0		\$ -	\$ -			\$ 2,250	
3.2g 3.2h	Instrument Transformer Stand	0		\$ -		\$ 1,050		\$ 1,050 \$ 1,050	
3.2h 3.2j	Arrester Stand Wave Trap Stand	0		\$ -	\$ -	\$ 1,050 \$ 4,500		\$ 1,050 \$ 4,500	
3.2k	Misc. Structures	0		\$ -			\$ -		\$ -
				7	T	7	т	T.	T
3.3	115kV								
									D 22 C55

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION STRUCTURES				\$ -		\$ 27,000		\$ 27,000
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV		_						
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV				_		4	4	4
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL MANO	PEOUINTRAFAIT				4				
	REQUIPTMENT				\$ -		\$ -		\$ -
	PTMENT / MATERIALS								
5.1	345kV					A 5500		A 5.500	A
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -		\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0		\$ -	\$ -	\$ -	\$ -	\$ - \$ 2.500	\$ - \$ -
5.1e 5.1f	CCVT'S	0	EA EA	\$ -	\$ -	\$ 2,500 \$ 1,500	\$ - \$ 4,500	, , , , , , , , , , , , , , , , , , , ,	
	Arresters	1	EA		\$ - \$ -				
5.1g 5.1h	Wave Traps Station Service Transformers	0		\$ -	\$ -	\$ 2,500	\$ 2,500		\$ 2,500
5.1j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.11	ruses	U	EA	-	, -	, -	, -	, -	-
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.20 5.2c	VT'S	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	0	EA	\$ -	\$ -		\$ -	\$ 1,500	
5.2f	Arresters	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2,	1 4363		27,	,	·	,	*	*	*
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -		\$ -
5.3c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	CT'S	0		\$ -			\$ -		\$ -
5.3e	CCVT'S	0		\$ -	\$ -		\$ -		\$ -
	Arresters	0		\$ -		\$ 1,500		\$ 1,500	
	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
5.3h	Station Service Transformers	0		\$ -			\$ -		\$ -
	Fuses	0		\$ -			\$ -		\$ -
3.5,				l ·	l .	· ·			
TOTAL - SMAL	EQUIPTMENT / MATERIALS				\$ -		\$ 7,000		\$ 7,000
	DUSE / PANELS / GENERATOR						,		,
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
								,	D 22 -£55

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	PANELS	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Protection and Telecom Equipment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	š -	\$ -	\$ -	\$ -	\$ -	\$ -
				*	*	7	*	Ť	*
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS					Ÿ		*		*
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
	Rigid Bus, Fittings & Insulators	1	LS	\$ -	\$ -	\$ 21,000.00	\$ 21,000	\$ 21,000	\$ 21,000
7.3	Strain Bus, Connectors & Insulators	0	LS	\$ -	\$ -		\$ -	\$ 21,000	
7.4		0		\$ -	\$ -	\$ 42,000.00		\$ 42,000	
7.4	Grounding System	U	EA	ş -	, -	\$ 42,000.00	ş -	\$ 42,000	, -
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 21,000		\$ 21,000
I. New So	cotland Substation - Removal				\$ -		\$ 142,200		\$ 142,200
8. MOB/DEMC	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	Ś -	\$ -	\$ 1,422	\$ 1,422	\$ 1,422	\$ 1,422
	Project Management, Material Handling & Amenities					,	,		,
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 7,228	\$ 7,228	\$ 7,228	\$ 7,228
8.3	Utility PM and Project Oversite	1	LS		\$ -		\$ 1,422	\$ 1,422	
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 1,422	\$ 1,422	\$ 1,422	\$ 1,422
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 11,376	\$ 11,376	\$ 11,376	\$ 11,376
	LiDAR	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	EA	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500	\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 995	\$ -	\$ 995	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 3,555	\$ 3,555	\$ 3,555	\$ 3,555
	Permitting and Additional Costs						,	,	
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	_	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 427		\$ 427	
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	·	\$ -
8.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Anowance for Funds osed During Construction (AFODC)		LS				'		
	Calas Tay on Materials	-		'	т			\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	7	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 142		\$ 142	
IOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 26,852		\$ 26,852

NextEra - T021 Enterprise Line - (Segment A) Total: \$ 101,268

NextEra - T021 Enterprise Line	e - (Segm	nent A)		
		Supply	Installation	Total
J. Porter Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ -	\$ -
3. SUBSTATION STRUCTURES	\$	-	\$ -	\$ -
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ -	\$ -
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$ -
7. MISC ITEMS	\$	15,008	\$ 56,904	\$ 71,912
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,201	\$ 28,155	\$ 29,355
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	\$ -
SUBTOTAL:	\$	16,209	\$ 85,059	\$ 101,268
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	16,209	\$ 85,059	\$ 101,268

escription of work:

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Porter	Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000		\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ 27		\$ 75		\$ 102	\$ -
1.3	Substation Fence	0	LF	\$ 100		\$ 100		\$ 200	\$ -
1.4	Permanent Access Road - 20'-Wide	0	LF	\$ 35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ 14,940	\$ -		\$ -	\$ 30,940	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145		\$ 28,000		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ 4,482	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 9,282	
2.1f	Fuse Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,482		\$ 4,800	\$ -	\$ 9,282	
2.1k	Arrester Stand Foundations	0	EA	\$ 4,482	\$ -		\$ -	\$ 9,282	
2.1m	Wave Trap Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952		\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410		\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410		\$ 24,000	· .	\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,735		, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 7,735	
2.2f	Fuse Stand Foundations	0	EA	\$ 3,735			\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
									D 25 C55

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV								
	Circuit Breaker Foundations	0	EA	\$ 5,229					\$ -
	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600		. ,	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -			\$ 34,034	•
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -		\$ -
	Fuse Stand Foundations	0	EA	\$ 2,988			\$ -	\$ 6,188	
	Bus Support 3ph Foundations	0	EA	\$ 2,988			\$ -	\$ 6,188	
	Bus Support 1 Ph Foundations	0	EA	\$ 2,988				\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988			\$ -	\$ 6,188	
	Arrester Stand Foundations	0	EA	\$ 2,988			\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -		
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations	0	FA	ć 07.440	ć	ć 404.000	ć	ć 201.110	^
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -		\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ - \$ -	\$ - \$ -		\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -		\$ -	\$ 33,000	\$ -
2.35	Cenerator i dandation	•	EA.	7 10,000	7	7 17,000	,	33,000	-
2.6	Lightning Mast Foundations								
	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA		\$ -	\$ -	\$ -	\$ -	\$ -
-									
TOTAL - SUBST	TATION FOUNDATIONS				\$ -		\$ -		\$ -
3. SUBSTATIO	N STRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1c	Switch Stands	0	EA			ć 44.000	\$ -	\$ 29,600	\$ -
3.1d	le o l		EA	\$ 14,800	\$ -	\$ 14,800	7		
5.20	Fuse Stand	0	EA	\$ 14,800 \$ 14,800	\$ - \$ -			\$ 29,600	\$ -
	Bus Support 3ph	0			\$ -			\$ 29,600 \$ -	\$ - \$ -
3.1e			EA EA EA	\$ 14,800 \$ - \$ 3,700	\$ -	\$ 14,800 \$ - \$ 3,700	\$ -	\$ - \$ 7,400	\$ - \$ -
3.1e	Bus Support 3ph	0	EA EA	\$ 14,800 \$ -	\$ - \$ -	\$ 14,800 \$ - \$ 3,700	\$ - \$ -	\$ -	\$ - \$ -
3.1e 3.1f 3.1g	Bus Support 3ph Bus Support 1 Ph	0	EA EA EA	\$ 14,800 \$ - \$ 3,700	\$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ -	\$ - \$ 7,400	\$ - \$ - \$
3.1e 3.1f 3.1g 3.1h	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0	EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800	\$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0	EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures	0 0 0 0 0	EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800	\$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV	0 0 0 0 0 0	EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950	\$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone	0 0 0 0 0 0	EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0 0 0 0 0 0 0	EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600	\$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 0 0 0 0 0 0	EA E	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand	0 0 0 0 0 0 0	EA E	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025	S	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand Bus Support 3ph	0 0 0 0 0 0 0	EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 1,850 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ \$.7,400 \$.3,700 \$.3,700 \$.14,800 \$.12,950 \$.66,600 \$.66,600 \$.24,050 \$.24,050 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2c 3.2d 3.2e 3.2f	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand Bus Support 3ph Bus Support 1 Ph	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA E	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ - \$ 5,550	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2c 3.2d 3.2e 3.2f 3.2g	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA E	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ - \$ 5,550 \$ 2,590	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e 3.2f 3.2g 3.2f 3.2g 3.2h	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Arrester Stand Arrester Stand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA E	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295 \$ 1,295	S	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ 2,775 \$ 1,295 \$ 1,295	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ - \$ 5,550 \$ 2,590	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e 3.2f 3.2g 3.2h 3.2j	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Wave Trap Stand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA E	\$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 1,850 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ 2,775 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 5,550	S	\$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 1,850 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ 2,775 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 5,550	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ \$, 7,400 \$, 3,700 \$, 3,700 \$, 14,800 \$, 12,950 \$, 12,950 \$, 66,600 \$, 66,600 \$, 24,050 \$, 24,050 \$, 24,050 \$, 25,550 \$, 25,90 \$, 25,90 \$, 11,100	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e 3.2f 3.2g 3.2h 3.2j	Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Arrester Stand Arrester Stand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA E	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ 2,775 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 5,550	S	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ 2,775 \$ 1,295 \$ 1,295	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ - \$ 5,550 \$ 2,590	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -		\$ -	\$ 6,660	
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3h	Arrester Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TATION CONTINUES								
	TATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU									
4.1	345kV			4 200	A	4 00 000	A	å 00.000	
4.1a	Circuit Breakers	0	EA	\$ 200	\$ -	\$ 80,000	\$ -	\$ 80,200	•
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA EA	\$ -	\$ - \$ -		\$ - \$ -	\$ 750,000 \$ 750,000	
4.1d	345 kV - 115 kV Auto Transformer 230kV	0	EA	\$ -	э -	\$ 750,000	\$ -	\$ 750,000	· -
4.2 4.2a	Circuit Breakers	0	EA	\$ 115,000	Š -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2a 4.2b	Capacitor Banks	0	EA EA			\$ 80,000	:	\$ 195,000	•
4.20	Capacitor banks		EA	\$ -	\$ -	الالارانة د	\$ -	ب ۵۵٫۵۵۵	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
4.50	Capacitor Bariks	0	EA	- -	ş -	3 00,000	· -	\$ 00,000	, -
TOTAL - MAJO	L Dr Equiptment				\$ -		\$ -		\$ -
	IPTMENT / MATERIALS				,		· -		· ·
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,000	\$ -	\$ 15,000	\$ -	\$ 55,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500	\$ -	33,000	\$ -
5.1c	VT'S	0	EA	\$ -	\$ -		\$ -	\$ 12,000	
5.1d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.1e	CCVT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.1f	Arresters	0	EA	\$ 6,500	\$ -	\$ 1,500		\$ 8,000	
5.1g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j	Fuses	0	EA	\$ 15,000	\$ -	\$ 7,500	\$ -	\$ 22,500	\$ -
,						,			
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -		\$ -	\$ 47,500	
5.2c	VT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.2d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	
5.3c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.3d	CT'S	0		\$ 13,000					
5.3e	CCVT'S	0		\$ 8,000		\$ 8,000		\$ 16,000	
5.3f	Arresters	0		\$ 3,420				\$ 9,420	
5.3g	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
5.3h	Station Service Transformers	0		\$ -	\$ -		\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	L EQUIPTMENT / MATERIALS				\$ -		\$ -		\$ -
6. CONTROL H	OUSE / PANELS / GENERATOR				\$ -	\$ 85,000			
6.1	CONTROL HOUSE	0	EA	\$ 551,250			-	\$ 636,250	\$ -

7.4	Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1.0 Cattor Cases	6.2	Protection and Telecom Equipment	0	EA	\$	35,000	\$ -	\$ 12,500	\$ -	\$ 47,500	\$ -
\$5 \$5 \$5 \$5 \$5 \$5 \$5 \$5	6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
E. 6. Documents Document	6.4	Control Cables	0	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
Contractive System	6.5	SCADA and Communications	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.6 Source Company	6.6	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.6 Source Company			0						Ś -		\$ -
BA S TABLE S S S S S S S S S									\$ -		\$ -
Secondary Seco											•
TOTAL CONTICL MOUSE / MARKEY GENERATOR			· ·					7 .,			
7 Control &	0.10	Generator	0		17	100,000	· -	\$ 80,000	· -	3 180,000	-
7 Control &	TOTAL - CONTE	POL HOUSE / DANIELS / GENERATOR					ċ		ċ		\$ -
2.1 Command & Cabel French System 0							, -		· -		-
2.2 Read Bus, Fittings B insulators			0	15		405.00	ć	ć 170.00	Č.	ć 255	*
7.3 Seein Bus, Connection & Involutions 0 11 5 1138 5 5 38.3 5 5 5 5 5 5 5 5 5	7.1	Conduit & Cable Trench System	0	LF	\$	185.00	\$ -	\$ 170.00	\$ -	\$ 355	\$ -
7.4 Grounding System	7.2	Rigid Bus, Fittings & Insulators	1	LS	\$	15,008.40	\$ 15,008	\$ 56,904.00	\$ 56,904	\$ 71,912	\$ 71,912
1	7.3	Strain Bus, Connectors & Insulators	0	LF	\$	13.38	\$ -	\$ 39.35	\$ -	\$ 53	\$ -
7.7 Strain flus Insulation - 2286V	7.4	Grounding System	0	LF	<u>'</u>	6.93	\$ -	\$ 32.58	\$ -	\$ 40	\$ -
7.7 Strain But Installators - LISAV	7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$ -
7.7 Strain But Installators - LISAV			0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$ -
7.8			0								
7.30 SSYT Service			0	LS	Ś	50.000	\$ -	\$ 75.000	\$ -	\$ 125.000	\$ -
7.10 Central Condust from Trench to Equipment 0 15 5 15,000 5 5 25,000 5 7.11 Michael Maked Ma			0				\$ -		\$ -		\$ -
7.11 Misc. Naterials (Above and Below Ground)							\$ -		\$ -		•
7.12							•				
7.13		mise materials (ribore and selon orband)			+-	100,000	Y	ψ 100,000	Ψ	ψ 500,000	*
7.14											
7.15					1						
7.16											
7.17											
7.18											
7.19											
7.20											
7-21	7.19										
7.22 7.23 7.24 7.25 7.27 7.27 7.28 7.28 7.29 7.29 7.29 7.29 7.29 7.29 7.29 7.29	7.20										
7.23	7.21										
7.24 7.25 7.25 7.26 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25	7.22										
T.25	7.23										
Total - MISCITEMS	7.24										
Same State State											
Section Sect		TEMS					\$ 15.008		\$ 56,904		\$ 71,912
Section Sect											
Contractor Mobilization / Demobilization / Demobilizati	J. Porter	Substation - Install					\$ 15,008		\$ 56,904		\$ 71,912
8.1 Mob / Demob 1.0 LS S - S 719 S 7	8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
8.1 Mob / Demob 1.0 LS S - S 719 S 7		Contractor Mobilization / Demobilization									
Project Management, Material Handling & Amenities			1.0	LS	\$	-	\$ -	\$ 719	\$ 719	\$ 719	\$ 719
R.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 1											-
Site Accommodation, Facilities, Storage	8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS				\$ 3,655	\$ 3,655	\$ 3,655	\$ 3,655
Site Accommodation, Facilities, Storage		Heilite Das and Dasinst Oversite		1.0			ć	ć 710	ć 710	ė	ć -
Engineering					-				·		·
8.5 Design Engineering 1 LS \$ - \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5,753 \$ 5 - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$			1	LS	1>	-	> -	ş /19	ş /19	ə /19	\$ 719
8.6 LiDAR - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<					1,						
8.7 Geotech 4 EA \$ - \$ - \$ 3,500 \$ 3,500 \$ 8.8 Surveying/Staking 1 Site \$ - \$ - \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 503 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 <td< td=""><td></td><td></td><td>1</td><td></td><td>T .</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>			1		T .						
8.8 Surveying/Staking 1 Site \$ - \$ - \$ 503 \$ 503 \$ Testing & Commissioning Testing & Commissioning of T-Line and Equipment 1 LS \$ - \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$ 1,798 \$			-								
Testing & Commissioning											
8.9 Testing & Commissioning of T-Line and Equipment 1 LS \$ - \$ 1,798 \$ 1,798 \$ Permitting and Additional Costs - LS \$ - \$ - \$ - \$ - 8.10 Environmental Licensing & Permitting Costs - LS \$ - \$ - \$ - \$ - \$ - \$ 8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ 8.12 Warranties / LOC's 1 LS \$ - \$ 2.16 \$ 2.16 \$			1	Site	\$	-	\$ -	\$ 503	\$ 503	\$ 503	\$ 503
Permitting and Additional Costs LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <											
8.10 Environmental Licensing & Permitting Costs - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<			1	LS	\$	-	\$ -	\$ 1,798	\$ 1,798	\$ 1,798	\$ 1,798
8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -		Permitting and Additional Costs									
8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.12 Warranties / LOC's 1 LS \$ - \$ - \$ 216 \$ 216 \$ 216 \$			-								
8.13 Real Estate Costs (New) - LS \$ - \$ - \$ - \$		Real Estate Costs (New)		LS	\$						

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 1,201	\$ 1,201	\$ -	\$ -	\$ 1,201	\$ 1,201
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 72	\$ 72	\$ 72	\$ 72
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,201		\$ 28,155		\$ 29,355

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J. SS Porter-Install

NextEra - T021 Enterprise Line - (Segment A) Total: \$ 552,493

NextEra - T021 Enter	orise Line - (Segmen	t A)			
		Supply	Installation		Total
K. Porter Substation - Removal					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$. \$	-
2. SUBSTATION FOUNDATIONS	\$	-	\$ 126,6	00 \$	126,600
3. SUBSTATION STRUCTURES	\$	-	\$ 206,1	.00 \$	206,100
4. MAJOR EQUIPTMENT	\$	-	\$ 43,5	00 \$	43,500
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 59,5	00 \$	59,500
6. CONTROL HOUSE / PANELS	\$	-	\$. \$	-
7. MISC ITEMS	\$	-	\$ 38,6	13 \$	38,613
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 78,1	81 \$	78,181
CONTRACTOR MARK-UP (OH&P)	\$	-	\$. \$	-
SUBTOTAL:	\$	-	\$ 552,4	93 \$	552,493
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$. \$	-
TOTAL:	\$	-	\$ 552,4	93 \$	552,493

escrip	tion of	Wor	k:
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Estimate Revision:

Substation - Removal								
RADING/ FENCING / CIVIL								
Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000		\$ 203,000	
Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75		\$ 75	
Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
								i
								i
								i
								i
								i
REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
FOUNDATIONS								
345kV								
Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
230kV								
Circuit Breaker Foundations	3	EA	\$ -	\$ -	\$ 7,200	\$ 21,600	\$ 7,200	\$ 21,600
Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	\$ 55,000
Switch Stand Foundations	5	EA	\$ -	\$ -	\$ 5,200	\$ 26,000	\$ 5,200	\$ 26,000
Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C C C C S F F B B B Irr A A W S f C C C C C C C C C C C C C C C C C C	FOUNDATIONS MSKV Circuit Breaker Foundations Lajacatior Bank Foundations Laisson DE Foundations (for DE A frame str stand alone) Laisson DE Foundations (for DE A frame str shared column) witch Stand Foundations was Stand Foundations was Support 3ph Foundations was Support 1 Ph Foundations sus Support 1 Ph Foundations sus Support 1 Ph Foundations wave Transformer Stand Foundations wave Trap Stand Foundations vave Trap Stand Foundations vation Service Foundations disc. Structure Foundations station Service Foundations disc. Structure Foundations capacitor Bank Foundations capacitor Bank Foundations capacitor Bank Foundations capacitor Bank Foundations (for DE A frame str stand alone) acisson DE Foundations (for DE A frame str stand column) witch Stand Foundations	FOUNDATIONS ### ### ### ### ### ### ### ### ### #	FOUNDATIONS ### ### ### ### ### ### ### ### ### #	Circuit Breaker Foundations		FOUNDATIONS		Section Sect

2.28 als logocors in Frontinetics 2.28 als logocors in Frontinetics 2.29 als logocors in Frontinetics 2.20 als logocors in Frontinetics 2.20 als logocors in Frontinetics 2.20 als logocors in Frontinetics 2.21 als logocors in Frontinetics 2.22 als logocors in Frontinetics 2.24 als logocors in Frontinetics 2.25 als logocors in Frontinetics 2.26 als logocors in Frontinetics 2.27 als logocors in Frontinetics 2.28 als logocors in Frontinetics 2.29 als logocors in Frontinetics 2.20 als logocors in Frontinetics 2.21 als logocors in Frontinetics 2.22 als logocors in Frontinetics 2.24 als logocors in Frontinetics 2.25 als logocors in Frontinetics 2.26 als logocors in Frontinetics 2.27 als logocors in Frontinetics 2.28 als logocors in Frontinetics 2.29 als logocors in Frontinetics 2.20 als logocors in Frontinetics 2.20 als logocors in Frontinetics 2.21 als logocors in Frontinetics 2.22 als logocors in Frontinetics 2.24 als logocors in Frontinetics 2.25 als logocors in Frontinetics 2.26 als logocors in Frontinetics 2.27 als logocors in Frontinetics 2.28 als logocors in Frontinetics 2.29 als logocors in Frontinetics 2.20 als logocors in Frontinetics 2.21 als logocors in Frontinetics 2.22 als logocors in Frontinetics 2.23 als logocors in Frontinetics 2.24 also logocors in Frontinetics 2.25 also logocors in Frontinetics 2.26 also logocors in Frontinetics 2.27 also logocors in Frontinetics 2.28 also logocors in Frontinetics 2.29 also logocors in Frontinetics 2.20 also logocors in Frontinetics 2.20 also logocors in Frontinetics 2.20 also logocors in Frontinetics 2.21 also logocors in Frontinetics 2.22 also logocors in Frontinetics 2.23 also logocors in Frontinetics 2.24 also logocors in Frontinetics 2.25 also logocors in Frontinetics 2.26 also logocors in Frontinetics 2.27 also logocors in Frontinetics 2.28 also logocors in Frontinetics 2.29 also logocors in Frontinetics	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.31 Instrument Tourishment Shared Conditions								•		
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3.2 230kV EA \$ \$ \$ \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 <td>3.1j</td> <td>Wave Trap Stand</td> <td>0</td> <td>EA</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td>	3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ 135,000 \$ 27,000 \$ 27,000 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 <t< td=""><td>3.1k</td><td>Misc. Structures</td><td>0</td><td>EA</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td></t<>	3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ - \$ 27,000 \$ 135,000 \$ 27,000 \$ 27,000 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 \$ 9,750 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
3.2b Substation A-Frame Structures - Shared Column 5 EA \$ - \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 27,000 \$ 135,000 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ \$ 9,750 \$ 58,500 \$ 9,750 \$ \$ 9,500 \$ <td>3.2</td> <td>230kV</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	3.2	230kV								
3.2c Switch Stands 6 EA \$ - \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ 9,750 \$ 58,500 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2d Fuse Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	3.2b	Substation A-Frame Structures - Shared Column	5	EA	\$ -	\$ -	\$ 27,000			\$ 135,000
3.2d Fuse Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	3.2c	Switch Stands	6	EA	\$ -	\$ -	\$ 9,750	\$ 58,500	\$ 9,750	\$ 58,500
3.2f Bus Support 1 Ph 0 EA \$ - \$ 2,250 \$ - \$ 2,250 \$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 6,300 \$ 1,050 \$ 6,300 3.2j Wave Trap Stand 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <td>3.2d</td> <td>Fuse Stand</td> <td>0</td> <td>EA</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td>	3.2d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2g Instrument Transformer Stand 6 EA \$ - \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 3.2h Arrester Stand 6 EA \$ - \$ - \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 3.2j Wave Trap Stand 0 EA \$ - \$ - \$ 4,500 \$ - \$ 4,500 \$ -	3.2e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2h Arrester Stand 6 EA \$ - \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 3.2j Wave Trap Stand 0 EA \$ - \$ - \$ 4,500 \$ - \$ 4,500 \$ -	3.2f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	\$ -
3.2h Arrester Stand 6 EA \$ - \$ 1,050 \$ 6,300 \$ 1,050 \$ 6,300 3.2j Wave Trap Stand 0 EA \$ - \$ - \$ 4,500 \$ - \$ 4,500 \$ -	3.2g	Instrument Transformer Stand	6	EA	\$ -	\$ -	\$ 1,050	\$ 6,300	\$ 1,050	\$ 6,300
3.2j Wave Trap Stand 0 EA \$ - \$ - \$ 4,500 \$ - \$ 4,500 \$ -			6	EA	\$ -					
	3.2j	Wave Trap Stand	0	EA	\$ -	\$ -				\$ -
		Misc. Structures	0	EA	\$ -	\$ -			\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -		\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION STRUCTURES				\$ -		\$ 206,100		\$ 206,100
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	·	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	3	EA	\$ -	\$ -	\$ 14,500	\$ 43,500	\$ 14,500	\$ 43,500
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
-									
4.3	115kV				4				
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL MANG	D FOLUDTA FAIT				4				
	R EQUIPTMENT				\$ -		\$ 43,500		\$ 43,500
	IPTMENT / MATERIALS								
5.1	345kV					A 5.500	A	A 5.500	A
5.1a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ - \$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ - \$ -			\$ 5,500 \$ -	
5.1c 5.1d	VT'S CT'S	0	EA EA	\$ -				-	\$ - \$ -
	CCVT'S	0	EA	\$ - \$ -		\$ - \$ 2,500	\$ -	\$ - \$ 2,500	\$ -
5.1e 5.1f		0							
	Arresters	0	EA	\$ -	\$ -			\$ 1,500 \$ 2,500	\$ - \$ -
5.1g 5.1h	Wave Traps Station Service Transformers	0	EA	\$ -		-,	\$ -	, ,,,,,	
5.1ii 5.1j	Station Service Transformers Fuses	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ -	\$ - \$ -
3.1	ruses	U	EA	, -	, -	, -	· -	, -	-
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	2	EA	\$ -	\$ -	\$ 5,500	\$ 11,000	\$ 5,500	\$ 11,000
5.2b	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -		\$ 5,500		\$ 5,500	\$ 16,500
5.2c	VT'S	2	EA	\$ -				\$ 1,500	\$ 3,000
5.2d	CT'S	0	EA	\$ -		\$ -	\$ -	\$ 1,500	\$ -
5.2e	CCVT'S	6	EA	\$ -		\$ 1,500	'	\$ 1,500	
5.2f	Arresters	6	EA	\$ -		\$ 2,500	\$ 15,000	\$ 2,500	\$ 15,000
5.2g	Wave Traps	2	EA	\$ -	\$ -	\$ 2,500	\$ 5,000	\$ 2,500	\$ 5,000
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2		0		· ·	7	-	· ·	7	T
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0				\$ 5,500	'	\$ 5,500	\$ -
5.3c	VT'S	0					\$ -		\$ -
5.3d	CT'S	0					\$ -		\$ -
5.3e	CCVT'S	0					\$ -	\$ -	\$ -
5.3f	Arresters	0				\$ 1,500		\$ 1,500	
5.3g	Wave Traps	0					\$ -		\$ -
5.3h	Station Service Transformers	0			\$ -		\$ -		\$ -
5.3j	Fuses	0					\$ -		\$ -
3.31	1 4363	U	LA	-	-	-	-	-	-
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 59,500		\$ 59,500
	OUSE / PANELS / GENERATOR				,		2 33,300		2 33,300
U. CONTROL II	OUL /LU / OLITERATOR								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.2	PANELS	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Protection and Telecom Equipment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - CON	TROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEM	IS								
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	1	L.S.	\$ -	\$ -	\$ 18,937.50	\$ 18,938	\$ 18,938	\$ 18,938
7.3	Strain Bus, Connectors & Insulators	1	L.S.	\$ -	\$ -	\$ 19,675.00	\$ 19,675	\$ 19,675	\$ 19,675
7.4	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00		\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MIS	CITEMS				\$ -		\$ 38,613		\$ 38,613
	er Substation - Removal				\$ -		\$ 474,313		\$ 474,313
8. MOB/DEN	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
0.1	Project Management, Material Handling & Amenities	_		<u> </u>	Ť	Ψ 1,7 1.5	ψ ,,, ,, ,	ψ 1,7 1.5	* ',,, ',
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 24,109	\$ 24,109	\$ 24,109	\$ 24,109
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 4,743		\$ 4,743	
	Engineering		-	T'	İ.		, ,		
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 37,945	\$ 37,945	\$ 37,945	\$ 37,945
8.6	LiDAR	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.7	Geotech	-	EA	\$ -	\$ -	\$ 3,500	\$ -		\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 3,320	\$ -		š -
0.0	Testing & Commissioning		- Once	<u> </u>	Ť	ÿ 3,520	·	ÿ 3,320	*
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 11,858	\$ -	\$ 11,858	\$ -
0.5	Permitting and Additional Costs			<u> </u>	Ť	Ţ 11,050	·	Ų 12,000	*
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	т	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 1,423	\$ 1,423		\$ 1,423
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ 1,423	\$ 1,423		\$ 1,423
8.14	Real Estate Costs (New) Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.15		-	LS	\$ -	\$ -	\$ -	\$ -		\$ - \$ -
8.15	Legal Fees Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ - \$ -	\$ -	\$ - \$ -	т	\$ - \$ -
8.17	Allowance for Funds osed Duffing Construction (AFODC)	-	LS	\$ -	\$ -	\$ -	\$ - \$ -		\$ -
8.17	Salos Tay on Materials	1	LS	\$ -	\$ -	\$ -	\$ - \$ -		\$ -
	Sales Tax on Materials		LS	-	\$ - \$ -	\$ -	\$ - \$ 474		
8.19	Fees for permits, including roadway, railroad, building or other local permits FEED FOR STATE OF THE PROPERTY	1	LS		\$ -	4/4	\$ 4/4	·	
TOTAL - IVIOE	DEINIOB, ENGINEERING, PERINITTING, TAC, PIVI & INDIRECTS:				- د		78,181		\$ 78,181

NextEra - T021 Enterprise Line - (Segment A)

L. Interconnection Edic Station

Estimate Revision: 5 Total: \$ 2,126,997

NextEra - T021 Enterprise Line	- (Segme	ent A)				
		Supply		Installation		Total
L. Interconnection Edic Station						
1. CLEARING & ACCESS	\$	-	\$	367,850	\$	367,850
2. FOUNDATIONS	\$	168,366	\$	170,169	\$	338,536
3. STRUCTURES	\$	501,469	\$	321,821	\$	823,289
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-
5. INSULATORS, FITTINGS, HARDWARE	\$	160,000	\$	94,400	\$	254,400
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	66,387	\$	276,535	\$	342,922
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	896,222	\$	1,230,776	\$	2,126,997
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	896.222	Ś	1.230.776	Ś	2.126.997

escrip	otion of	Wor	k:
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
L. Interc	onnection Edic Station								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$ -	\$ 5,000	-		
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	3,500.0	LF	\$ -	\$ -	\$ 4			\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	300.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800		\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	20,000.0	SF	\$ -	\$ -		\$ 70,400		,
1.10	Restoration for Work Pad areas	4,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 600		
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580		\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -		\$ 4,130		\$ 4,130	
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	•
1.16	Culverts / Misc. Access	-	EA) \$ -	\$ 1,250		\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	. ,	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 2	7 \$ -	\$ 75		\$ 102	
TOTAL - CLEAR	RING & ACCESS				\$ -		\$ 367,850		\$ 367,850
2. FOUNDATIO	ONS								
2.1	Foundation – Drilled Pier – 8'X 27'	3	EA	\$ 41,332	\$ 123,995	\$ 41,774	\$ 125,322	\$ 83,106	\$ 249,317
2.2	Foundation – Drilled Pier – 8'X 29'	1	EA	\$ 44,372	2 \$ 44,372	\$ 44,847	\$ 44,847	\$ 89,219	\$ 89,219
2.3	Rock Excavation Adder	-	CY	\$ -	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.4									
2.5									
2.6									
2.7						1			
2.7									
2.9									
2.10									
2.11									
2.12									

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Su	apply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	то	DTAL
2.13											
2.14										<u> </u>	
2.15 TOTAL - FOUNI	DATIONS					\$ 168,366		\$ 170,169		ć	338,536
3. STRUCTURES				_		\$ 168,366		\$ 170,169		\$	330,330
	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) – 105′	3	Structure	Ś	98,883	\$ 296,648	\$ 59,330	\$ 177,989	\$ 158,212	\$	474,636
3.2	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	Ś		\$ 202,797		, ,	\$ 324,475	-	324,475
3.3	Install Grounding and Grounding Accessories	4	Pole	\$	506						24,178
3.4	0 0						,	,			
3.5											
3.6										<u> </u>	
3.7											
3.8				+						├	
3.9				+							
3.10 3.11				+							
3.12				+	\longrightarrow					\vdash	
3.13				+							
3.14											
3.15											
TOTAL - STRUC	L CTURES					\$ 501,469		\$ 321,821		Ś	823,289
	R, SHIELDWIRE, OPGW					501,403		7 321,021		Ť	023,203
	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$	3.53	\$ -	\$ 5.00	\$ -	\$ 8.53	\$	-
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.55	\$ -	\$ 5.00		\$ 6.55	\$	-
4.3	(1) 3/8" EHS7 Steel	-	LF	\$	0.72		\$ 5.00		\$ 5.72		-
4.5	Remove Existing Cable From Existing Structures	-	Mile	\$		\$ -	\$ 30,000		\$ 30,000.00		-
4.6	Remove Existing OPGW Cable	-	Mile	\$		\$ -	\$ 12,000		\$ 12,000.00		-
4.7	Remove Existing EH7	-	Mile	\$	-	\$ -	\$ 12,000	\$ -	\$ 12,000.00	,	-
4.8		_		+	-					\vdash	
4.10	Rider Poles - Relocated	_	Set	5	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	Ś	
4.11	Rider Poles	-	EA	Ś	1,750		\$ 3,500		\$ 5,250.00		-
TOTAL: CONDU	JCTOR, SHIELDWIRE, OPGW:					\$ -		\$ -		\$	-
	FITTINGS, HARDWARE										
	345kV Tangent (1-Group of 18-Bells Each Assembly)									<u> </u>	
	115kV Tangent (1-Group of 9-Bells Each Assembly)			+							
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$	1,800	\$ 108,000	\$ 720	\$ 43,200	\$ 2,520	\$	151,200
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) OPGW Assembly - Tangent	_	Assembly	Ś	200	\$ -	\$ 150	\$ -	\$ 350	\$	
	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	4	Assembly	\$		\$ 1,000	\$ 150		\$ 400		1,600
	OHSW Assembly - Angle / DE	4	Assembly	Š	250						1,600
	OPGW Splice Boxes	-	Set	\$	1,746		\$ 2,274		\$ 4,020		-
5.9	OPGW Splice & Test	-	EA	\$	2,520		\$ 2,520		\$ 5,040		-
	Spacer - Conductor	-	EA	\$	50		\$ 35		\$ 85		-
5.11	Vibration Dampers - Conductor	-	EA	\$			\$ 35		\$ 70	<u> </u>	-
	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27		\$ 35		\$ 62	-	-
5.13	Guys, Anchors, and Accessories	-	EA	\$		\$ -	\$ 885	· .	\$ 1,605		-
	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$	-
5.15											
5.16				+	\longrightarrow						
5.17 5.18		+		+	\longrightarrow						
	Interconnection Arrangements	1	EA	Ś	50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 100,000	Ś	100,000
5.20		1	SA.	+*	30,000	- 30,000	- 30,000	50,000	₊ 100,000	_	200,000
	ATOR, FITTINGS, HARDWARE					\$ 160,000		\$ 94,400		\$	254,400
L. Interco	onnection Edic Station					\$ 829,835		\$ 954,240		\$	1,784,075
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob Project Management, Material Handling & Amenities	1	LS	\$	-	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$	17,841

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 90,685	\$ 90,685	\$ 90,685	\$ 90,685
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 89,204	\$ 89,204	\$ 89,204	\$ 89,204
6.6	LiDAR	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	Geotech	1	LS	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 12,489	\$ 12,489	\$ 12,489	\$ 12,489
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	EA	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 5,352	\$ 5,352	\$ 5,352	\$ 5,352
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 66,387	\$ 66,387		\$ -	\$ 66,387	\$ 66,387
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 1,784		\$ 1,784	\$ 1,784
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 66,387		\$ 276,535		\$ 342,922

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NextEra - T021 Enterprise Line - (Segment A) M. Interconnection New Scotland Station

Total: \$ 3,108,364

NextEra - T021 Enterp	orise Line - (Segme	ent A)			
		Supply	Installation		Total
M. Interconnection New Scotland Station					
1. CLEARING & ACCESS	\$	-	\$ 367,850	\$	367,850
2. FOUNDATIONS	\$	365,657	\$ 473,093	\$	838,749
3. STRUCTURES	\$	655,465	\$ 445,628	\$	1,101,092
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,555	\$ 26,100	\$	29,655
5. INSULATORS, FITTINGS, HARDWARE	\$	161,130	\$ 95,795	\$	256,925
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	94,864	\$ 419,228	\$	514,093
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	1,280,670	\$ 1,827,693	\$	3,108,364
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	¢	1 280 670	¢ 1 927 603	¢	3 109 364

Description	of Work:	7 1,280,070	7 1,027,033	3,100,30						
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supp	oly Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	connection New Scotland Station									
1. CLEARING	& ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$	-	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$	-	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$ -	\$	-	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$ -	\$	-	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$	-	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	300.0	LF	\$ -	\$	-	\$ 70	\$ 21,000	\$ 70	\$ 21,000
1.7	Snow Removal	-	LS	\$ -	\$	-	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$	-	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	20,000.0	SF	\$ -	\$	-	\$ 4	\$ 70,400	\$ 4	\$ 70,400
1.10	Restoration for Work Pad areas	4,000.0	SF	\$ -	\$	-	\$ 0.2	\$ 600	\$ 0	\$ 600
1.11	Temporary Access Bridge	-	EA	\$ -	\$	-	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$	-	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$	-	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$	-	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,00	\$	-	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 75	\$	-	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$	-	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$	-		\$ -		\$ -
1.19					\$	-		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 2	7 \$	-	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEA	RING & ACCESS				\$	-		\$ 367,850		\$ 367,850
2. FOUNDATI	ONS									
2.1	Foundation – Drilled Pier – 8'X 50'	3	EA	\$ 76,50) \$ 2	229,501	\$ 77,320	\$ 231,959	\$ 153,820	\$ 461,459
2.2	Foundation – Drilled Pier – 8'X 89'	1	EA	\$ 136,15	5 \$ 1	136,156	\$ 137,614	\$ 137,614	\$ 273,770	\$ 273,770
2.3	Rock Excavation Adder	51.8	СУ	\$ -	\$	-	\$ 2,000	\$ 103,520	\$ 2,000	\$ 103,520
2.4										
2.5										
2.6										
2.7										
2.8										

2.9

Estimate

Revision:

5

ltem	Item Description	Estimated Quantity	Unit of Measure	Material S	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.10										
2.11										
2.12										
2.14										
2.15										
TOTAL - FOUN						\$ 365,657		\$ 473,093		\$ 838,749
3. STRUCTURE	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	3	Structure	\$	178,026	\$ 534,077	\$ 106,815	\$ 320,446	\$ 284,841	\$ 854,522
3.2	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$	116,328	\$ 116,328	\$ 69,797	\$ 69,797		\$ 186,125
3.3	Install Grounding and Grounding Accessories	10	Structure	\$	506	\$ 5,060	\$ 5,539	\$ 55,385		\$ 60,445
3.4						\$ -		\$ -		
3.5						_				
3.6						\$ - \$ -		\$ - \$ -		
3.8						\$ -		\$ -		
3.9						\$ -		\$ -		
3.10						\$ -		\$ -		
3.11						\$ -		\$ -		
3.12 3.13						\$ - \$ -		\$ - \$ -		
						•		•		
3.14						\$ -		\$ -		
3.15						\$ -		\$ -		
TOTAL - STRUC						\$ 655,465		\$ 445,628		\$ 1,101,092
	R, SHIELDWIRE, OPGW									
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571	1,500	LF LF	\$	1.90 1.35	\$ 2,850 \$ -	\$ 5.00 \$ 5.00	\$ 7,500 \$ -		\$ 10,350 \$ -
4.2	(1) OPGW 36 FIDER AC-33/38/371 (1) 3/8" EHS7 Steel	1,500	LF	Ś	0.47	\$ 705	\$ 5.00	\$ 7,500		\$ 8,205
4.5	Remove Existing 345kV Cable From Existing Structures	0.3	Mile	\$	-	\$ -	\$ 30,000	\$ 7,500		\$ 7,500
4.6	Remove Existing OPGW Cable	-	Mile	\$	-	\$ -	\$ 12,000	\$ -	, , , , , , , , , ,	\$ -
4.7	Remove Existing EH7	0.3	Mile	\$	-	\$ -	\$ 12,000	\$ 3,600	\$ 12,000.00	\$ 3,600
4.8										
4.9 4.10	Rider Poles - Relocated	_	Set	\$	_	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$	1,750	\$ -	\$ 3,500	\$ -		\$ -
	JCTOR, SHIELDWIRE, OPGW:					\$ 3,555		\$ 26,100		\$ 29,655
	FITTINGS, HARDWARE									
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$	1,800 900	\$ -	\$ 720 \$ 560		\$ 2,520 \$ 1,460	\$ - \$ -
5.2 5.3	115kV Tangent (1-Group of 9-Bells Each Assembly) 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	- 60	Assembly Assembly	\$	1,800	\$ - \$ 108,000	\$ 720			\$ - \$ 151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900	\$ -	\$ 560	\$ -		\$ -
5.5	OPGW Assembly - Tangent	-	Assembly	\$	200	\$ -	\$ 150	\$ -		\$ -
5.6	OPGW Assembly - Angle / DE	-	Assembly	\$	250	\$ -	\$ 150			\$ -
5.7 5.8	OHSW Assembly - Angle / DE OPGW Splice Boxes	4	Assembly Set	\$	250 1,746	\$ 1,000 \$ -	\$ 150 \$ 2,274	\$ 600 \$ -		\$ 1,600 \$ -
5.9	OPGW Splice & Test	-	EA	\$	2,520	\$ -	\$ 2,520	\$ -	. ,	\$ -
5.10	Spacer - Conductor	9	EA	\$	50	\$ 450	\$ 35	\$ 315		\$ 765
5.11	Vibration Dampers - Conductor	48	EA	\$	35	\$ 1,680	\$ 35	\$ 1,680	\$ 70	\$ 3,360
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$ -
5.13	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	7	\$ -		\$ -
5.14 5.15	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ - \$ -	\$ 1,006	\$ - \$ -	\$ 1,776	\$ - \$ -
5.15	Interconnection Arrangements	1	EA	\$	50,000	_	\$ 50,000		\$ 100,000	
5.17		-		T		\$ -	. 55,500	\$ -		\$ -
5.18						\$ -		\$ -		\$ -
5.19						\$ -		\$ -		\$ -
5.20	ATOR, FITTINGS, HARDWARE					\$ - \$ 161,130		\$ - \$ 95,795		\$ -
								\$ 95,795 \$ 1,408,465		\$ 256,925 \$ 2,594,271
	connection New Scotland Station B. ENGINEERING, PERMITTING, T&C. PM & INDIRECTS:					\$ 1,185,806		7 1,400,405		2,394,2/1
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization									
	CONTRACTOR INCOMINATION / DEMODRINATION			1					1	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 131,867	\$ 131,867	\$ 131,867	\$ 131,867
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 129,714	\$ 129,714	\$ 129,714	\$ 129,714
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.7	Geotech	1	Location	\$	-	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 18,160	\$ 18,160	\$ 18,160	\$ 18,160
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 94	,864	\$ 94,864	\$ -	\$ -	\$ 94,864	\$ 94,864
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 2,594	\$ 2,594	\$ 2,594	\$ 2,594
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 94,864		\$ 419,228		\$ 514,093

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NextEra - T021 Enterprise Line - (Segment A) J. Porter Substation - Install

Estimate	E	Total	ċ	1,051,306
Revision:	3	i Utai.	۶	1,031,300

NextEra - T021 Enterprise Line - (Segment A)								
	Supply Install		Installation	stallation Total				
J. Porter Substation - Install								
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-		
2. SUBSTATION FOUNDATIONS	\$	-	\$	-	\$	-		
3. SUBSTATION STRUCTURES	\$	-	\$	-	\$	-		
4. MAJOR EQUIPTMENT	\$	-	\$	-	\$	-		
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	-	\$	-		
6. CONTROL HOUSE / PANELS	\$	425,000	\$	425,000	\$	850,000		
7. MISC ITEMS	\$	-	\$	-	\$	-		
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	34,000	\$	167,306	\$	201,306		
CONTRACTOR MARK-UP (OH&P)		•	\$	-	\$	-		
SUBTOTAL:	\$	459,000	\$	592,306	\$	1,051,306		
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-		
TOTAL:	\$	459,000	\$	592,306		1,051,306		

Description of Work:

Description	UI WUIK.								
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Porter	Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ 27	' \$ -	\$ 75	\$ -	\$ 102	\$ -
1.3	Substation Fence	0	LF	\$ 100	- \$	\$ 100	\$ -	\$ 200	\$ -
1.4	Permanent Access Road - 20'-Wide	0	LF	\$ 35	; \$ -	\$ 285	\$ -	\$ 320	\$ -
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATION	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ 14,940	- \$	\$ 16,000	\$ -	\$ 30,940	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145	; \$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145	5 \$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
	Switch Stand Foundations	0	EA	\$ 4,482		\$ 4,800		, , , ,	
	Fuse Stand Foundations	0	EA	\$ 4,482	! \$ -	\$ 4,800	\$ -		\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
	Instrument Transformer Stand Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
	Arrester Stand Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	•
	Wave Trap Stand Foundations	0	EA	\$ 4,482	! \$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	230kV								
	Circuit Breaker Foundations	0	EA	\$ 11,952		\$ 12,800	+ '	\$ 24,752	· ·
	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410		\$ 24,000		, .	
1 221	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	ols -	\$ 24,000	ls -	\$ 46,410	s -
	Switch Stand Foundations	0	EA	\$ 3,735		\$ 4,000		\$ 7,735	

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2f	Fuse Stand Foundations	0	EA	\$ 3,735		7 .,	\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA					\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735		7 .,	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735			\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA EA	\$ 3,735 \$ 3,735		\$ 4,000 \$ 4,000	\$ - \$ -	\$ 7,735 \$ 7,735	\$ - \$ -
2.2m 2.2n	Wave Trap Stand Foundations Station Service Foundations	0	EA EA				T .		-
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ - \$ -		<u>\$</u> -	\$ - \$ -	\$ - \$ -
2.2μ	Misc. Structure Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.3	115kV			-	· -	<u>, </u>	, -	, -	, -
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA		\$ -		\$ -	\$ 6,188	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988		\$ 3,200		\$ 6,188	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	+ -,	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations	-		4	_				_
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110		\$ 104,000	\$ -		\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700		\$ 80,000			\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -		\$ - \$ -	Ÿ	\$ - \$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -		\$ -	\$ 33,000	\$ -
2.55	Contract Foundation	Ů		20,000	Ť	7 27,000	*	ÿ 33,000	<u>*</u>
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b		0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				7	*	7	*	*	T
	TATION FOUNDATIONS				\$ -		\$ -		\$ -
	ON STRUCTURES								
3.1	345kV				·				
3.1a	Substation A-Frame Structures - Stand alone	0	EA			\$ 37,000	\$ -	\$ 74,000	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA EA	\$ 37,000	\$ - \$ -	\$ 37,000 \$ 14,800	\$ -	\$ 74,000	\$ -
3.1c	Switch Stands					5 14 800 I	\$ -	\$ 29,600	\$ -
1 244		0		\$ 14,800		, , , , , , , , , ,	ć	ć 20.000	
3.1d	Fuse Stand	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ - \$ -	\$ 29,600	\$ -
3.1e	Fuse Stand Bus Support 3ph	0	EA EA	\$ 14,800 \$ -	\$ - \$ -	\$ 14,800 \$ -	\$ -	\$ -	\$ -
3.1e 3.1f	Fuse Stand Bus Support 3ph Bus Support 1 Ph	0 0 0	EA EA EA	\$ 14,800 \$ - \$ 3,700	\$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700	\$ - \$ -	\$ - \$ 7,400	\$ - \$ -
3.1e 3.1f 3.1g	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0	EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700	\$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0 0	EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700	\$ - \$ -
3.1e 3.1f 3.1g	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0	EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	0 0 0 0 0	EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800	\$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	0 0 0 0 0	EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800	\$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures	0 0 0 0 0	EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV	0 0 0 0 0 0	EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone	0 0 0 0 0 0 0 0	EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0 0 0 0 0 0 0 0	EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 0 0 0 0 0 0 0	EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ \$.7,400 \$.3,700 \$.3,700 \$.14,800 \$.12,950 \$.66,600 \$.66,600 \$.24,050	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand	0 0 0 0 0 0 0 0	EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e	Fuse Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand Bus Support 3ph	0 0 0 0 0 0 0 0	EA E	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ - \$ 5,550	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2j	Wave Trap Stand	0	EA	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500		\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -		\$ -	\$ 15,910	
3.3d	Fuse Stand	0	EA	\$ 7,955			\$ -	\$ 15,910	
3.3e	Bus Support 3ph	0	EA	\$ 3,330			\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850		. ,	\$ -	\$ 3,700	
3.3g	Instrument Transformer Stand	0	EA	\$ 740		\$ 740		\$ 1,480	
3.3h	Arrester Stand	0	EA	\$ 740			\$ -	\$ 1,480	
3.3j	Wave Trap Stand	0	EA	\$ 3,700		\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,475		\$ 6,475	т	\$ 12,950	
3.3K	IMISC. Structures	0	EA	\$ 6,475	ş -	\$ 0,475	ş -	\$ 12,950	, -
TOTAL CLIDS	TATION STRUCTURES				ć		<u> </u>		ć
					\$ -		\$ -		\$ -
4. MAJOR EQU									
4.1	345kV				4		_		
4.1a	Circuit Breakers	0	EA	\$ 200			\$ -	\$ 80,200	
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.20	Capacitor Banks	0	LA	-	-	3 80,000	-	3 80,000	-
4.2	115kV								
4.3				4 50,000	A	d 50,000	A	4 442.000	4
4.3a	Circuit Breakers	0	EA	\$ 52,000	\$ -		\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAIO	L DR EQUIPTMENT				\$ -		\$ -		\$ -
	IPTMENT / MATERIALS				, -		· -		, -
5.1	345kV								
		0	ГА	¢ 40,000	ċ	ć 1F.000	ċ	ć	ć
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,000			\$ -	\$ 55,000	\$ - \$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000		, , , , , , , , , , , , , , , , , , , ,	\$ -	ć 12.000	т
5.1c	VT'S	0	EA	\$ -	\$ -		\$ -	\$ 12,000	\$ -
5.1d	CT'S	0	EA	\$ 13,000		. ,	\$ -	\$ 21,000	
5.1e	CCVT'S	0	EA	\$ 13,000			\$ -	\$ 21,000	
5.1f	Arresters	0	EA	\$ 6,500		. ,	\$ -	\$ 8,000	
5.1g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1h	Station Service Transformers	0	EA	\$ 200,000		\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j	Fuses	0	EA	\$ 15,000	\$ -	\$ 7,500	\$ -	\$ 22,500	\$ -
	lanali v								
5.2	230kV			4 25	4	45.55	•	A 55	
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000		. ,	\$ -	\$ 50,000	•
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000		, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 47,500	
5.2c	VT'S	0	EA	\$ 13,000		,	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$ 13,000			\$ -	\$ 21,000	
5.2e	CCVT'S	0	EA	\$ 10,000		\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,000		\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000		,	\$ -	\$ 21,000	
5.2h	Station Service Transformers	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
5.2j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	s -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000		\$ 17,500		\$ 45,500	
5.3c	VT'S	0	EA	\$ 13,000			\$ -	\$ 21,000	
5.3d	CT'S	0	EA	\$ 13,000		\$ 8,000	<u>'</u>	\$ 21,000	
5.3e	CCVT'S	0	EA	\$ 8,000			\$ -	\$ 16,000	
5.3f	Arresters	0	EA	\$ 3,420		. ,		\$ 16,000	
5.3g	Wave Traps	0	EA				\$ -	\$ 9,420	\$ -
5.3h	Station Service Transformers	0	EA	\$ -			\$ -	\$ -	\$ -
ااد.د	Station Service transformers		EM	1 -	-		-	-	-

Item	Item Description	Estimated Quantity	Unit of Measure	Mat	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
5.3j	Fuses	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
						4				_	
	L EQUIPTMENT / MATERIALS OUSE / PANELS / GENERATOR					\$ -		\$ -		\$	-
6.1	CONTROL HOUSE	0	EA	\$	551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$	_
6.2	Protection and Telecom Equipment	1		\$	425,000	\$ 425,000	\$ 425,000		\$ 850,000	\$	850,000
6.3	125VDC Batteries	0		\$	75,000	\$ -	\$ 25,000		\$ 100,000		-
6.4	Control Cables	0	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.5	SCADA and Communications	0		\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0		\$	50,000	\$ -	\$ 100,000		\$ 150,000		-
6.7	DC Distribution System	0		\$,	\$ -	\$ 100,000		\$ 150,000		-
6.8	Security Fire Alarm	0		\$	7,500 7,500	\$ - \$ -	\$ 7,500 \$ 7,500		\$ 15,000 \$ 15,000	\$	-
6.10	Generator	0		\$	100,000	•	\$ 80,000		\$ 180,000		-
0.10	Scholator		LA	+ -	100,000	7	3 50,000	1	\$ 100,000	_	
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR					\$ 425,000		\$ 425,000		\$	850,000
7. MISC ITEMS											
7.1	Conduit & Cable Trench System	0	LF	\$	185.00	\$ -	\$ 170.00	\$ -	\$ 355	\$	-
7.2	Rigid Bus, Fittings & Insulators	0	LS	\$	15,008.40	\$ -	\$ 56,904.00	\$ -	\$ 71,912	\$	-
7.3	Strain Bus, Connectors & Insulators	0	LF	\$	13.38	\$ -	\$ 39.35	\$ -	\$ 53	\$	-
7.4	Grounding System	0	LF	\$	6.93	\$ -	\$ 32.58	\$ -	\$ 40	\$	-
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$	-
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$	-
7.7	Strain Bus Insulators - 115kV	0		\$,	\$ -	\$ 550		\$ 1,550		-
7.8	Low Voltage AC Station Service	0		\$	50,000	\$ -	\$ 75,000		\$ 125,000		-
7.9	SSVT Service	0		\$	45,000		\$ 45,000		\$ 90,000		-
7.10	Control Conduits from Trench to Equipment	0		\$		\$ -	\$ 125,000		\$ 250,000		-
7.11 7.12	Misc. Materials (Above and Below Ground)	0	LS	\$	180,000	\$ -	\$ 180,000	\$ -	\$ 360,000	\$	-
7.12											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20				-							
7.21 7.22											
7.23											
7.24											
7.25											
TOTAL - MISC	ITEMS					\$ -		\$ -		\$	-
J. Porter	Substation - Install					\$ 425,000		\$ 425,000		\$	850,000
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 8,500	\$ 8,500	\$ 8,500	\$	8,500
	Project Management, Material Handling & Amenities										
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 43,206	\$ 43,206	\$ 43,206	\$	43,206
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 8,500	\$ 8,500	\$ 8,500	\$	8,500
8.4	Site Accommodation, Facilities, Storage	1		\$	-	\$ -	\$ 8,500				8,500
	Engineering										
8.5	Design Engineering	1		\$		\$ -	\$ 68,000				68,000
8.6	LiDAR	-	LS	\$		\$ -	\$ -		\$ -		-
8.7 8.8	Geotech Surveying/Staking	- 1	EA Site	\$		\$ - \$ -	\$ 3,500 \$ 5,950		\$ 3,500 \$ 5,950		5,950
5.0	Testing & Commissioning	1	JILE	1	-	÷ -	2,950	3,950	2,330	٠	3,930
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 21,250	\$ 21,250	\$ 21,250	\$	21,250
	1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-						,	· · · · ·	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ite	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
	Permitting and Additional Costs										
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 2,550	\$ 2,550	\$ 2,550	\$	2,550
8.13	Real Estate Costs (New)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 34,0	00 \$	34,000	\$ -	\$ -	\$ 34,000	\$	34,000
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 850	\$ 850	\$ 850	\$	850
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	34,000		\$ 167,306		\$	201,306

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	NextEra - T021 Enterprise Line - (Segment A)
	ESTIMATE ASSUMPTIONS & CLARIFICATIONS
1	Cost Estimate is based on 2017 rates.
2	Construction schedule is in accordance with proposed schedule - we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
3	We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
4	All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
5	We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type.
6	Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
7	Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
8	Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
9	A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
10	We have assumed that all project details provided are accurate unless noted otherwise.
11	Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
12	A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
13	A contractor allowance of 4.347% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety
15	inspector, compliance inspector, environmental inspector, and SWPP inspector.
14	An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
	A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
	An allowance of 5% for transmission design and engineering has been included in the total section.
	An allowance of 8% for substation design and engineering has been included in the total section.
	An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
	An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
20	An allowance of 3.75% for substation testing and commissioning has been included in the total section.

An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.

New York state sales tax of 8% is included in all material pricing.

23 An allowance of 1.5% for insurance is included in the DPS sheet.



		NY Power Authority and North American Transmission (T025)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$54,770
	1.2	Foundations	\$35,794
	1.3	Structures	\$67,800
	1.4	Conductor, Shieldwire and OPGW	\$37,454
	1.5	Insulators, Fitting and Hardwares	\$13,068
		Subtotal (1)	\$208,887
	2	Substations	
#	2.1	Rotterdam Substation	\$46,629
Š	2.2	Edic Substation	\$2,153
Direct Cost	2.3	Princetown Substation	\$12,713
	2.4	New Scotland Substation	\$0
	2.5	Porter Substation	\$546
	2.6	Knickerbocker Substation	\$67,167
	2.7	Marcy Substation	\$17,553
	2.8	Substation Interconnections	\$8,301
		Subtotal (2)	\$155,062
		Total (1+2)	\$363,949
		Contractors Mark-up (15% of Total 1+2)	\$54,592
		Total Direct Cost (A)	\$418,541
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$3,639
-	3.2	Project Management, Material Handling & Amenities	\$20,427
Cos	3.3	Engineering	\$26,178
Indirect Cost	3.4	Testing & Commissioning	\$3,826
Indi	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$28,303
	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$9,589
		Total Indirect Cost (3)	\$100,882
	1	Subtotal Project Cost (B=A+3) 2017 \$	\$519,424
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project (Marcy and Edic Terminals)	\$7,727
	4.2	NUF identified during Evaluation (765kV Corona Mitigation)	\$116,005
		Subtotal NUF Cost (C)	\$123,731
		Total Project Cost (B+C) 2017 \$	\$643,155
		Total Project Cost 2018 \$	\$662,450

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Estimate Revision: 5

	NAT & NYPA - T025 - (Segment A, + 765kV) - Direct Costs	Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Edic to Princetown	\$ 122,946,653
Direct Labor, Material & Equipment Costs	A1. Marcy Interconnect & New Scotland SS Loop	\$ 27,109,751
Direct Labor, Material & Equipment Costs	B. Transmission Line Princetown to Rotterdam	\$ 20,488,282
Direct Labor, Material & Equipment Costs	C. Transmission Line Princetown to New Scotland	\$ 38,342,499
Direct Labor, Material & Equipment Costs	D. Rotterdam Substation - Install	\$ 43,017,974
Direct Labor, Material & Equipment Costs	E. Rotterdam Substation - Removal	\$ 3,611,030
Direct Labor, Material & Equipment Costs	F. Edic Substation - Install	\$ 2,117,185
Direct Labor, Material & Equipment Costs	G. Edic Substation - Removal	\$ 35,950
Direct Labor, Material & Equipment Costs	H. Princetown Substation - Install	\$ 12,713,164
Direct Labor, Material & Equipment Costs	l.	\$ -
Direct Labor, Material & Equipment Costs	J. Porter Substation - Install	\$ 71,912
Direct Labor, Material & Equipment Costs	K. Porter Substation - Removal	\$ 474,313
Direct Labor, Material & Equipment Costs	L. Interconnection Edic Station	\$ 1,784,075
Direct Labor, Material & Equipment Costs	M. Interconnection New Scotland Station	\$ 2,594,271
Direct Labor, Material & Equipment Costs	N. Interconnection Rotterdam Station	\$ 3,922,412
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (765kV Corona Mitigation)	\$ 82,860,450
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$ 5,519,000
Direct Labor, Material & Equipment Costs	Q. Knickerbocker Substation - Install	\$ 67,167,025
Direct Labor, Material & Equipment Costs	R. Marcy Substation - Install	\$ 17,552,506
	SUBTOTAL:	\$ 452,328,452
	CONTRACTOR MARK-UP (OH&P)	\$ 67,849,268
	CONTINGENCY ON ENTIRE PROJECT	\$ -
	TOTAL DIRECT:	\$ 520,177,720

	NAT & NYPA - T025 - (Segment A, + 765kV) - Indirect Costs		Total Each Segment
Indirect Costs	A. Transmission Line Edic to Princetown	\$	36,074,996
	A1. Marcy Interconnect & New Scotland SS Loop	\$	7,071,214
Indirect Costs	B. Transmission Line Princetown to Rotterdam	\$	4,232,179
Indirect Costs	C. Transmission Line Princetown to New Scotland	\$	8,706,295
Indirect Costs	D. Rotterdam Substation - Install	\$	10,061,233
Indirect Costs	E. Rotterdam Substation - Removal	\$	542,106
Indirect Costs	F. Edic Substation - Install	\$	490,771
Indirect Costs	G. Edic Substation - Removal	\$	5,361
Indirect Costs	H. Princetown Substation - Install	\$	3,058,558
Indirect Costs	l.	\$	-
Indirect Costs	J. Porter Substation - Install	\$	14,298
Indirect Costs	K. Porter Substation - Removal	\$	70,732
Indirect Costs	L. Interconnection Edic Station	\$	316,687
Indirect Costs	M. Interconnection New Scotland Station	\$	475,944
Indirect Costs	N. Interconnection Rotterdam Station	\$	631,545
Indirect Costs	O. System Upgrade Facilities (765kV Corona Mitigation)	\$	20,715,113
Indirect Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	1,380,000
Indirect Costs	Q. Knickerbocker Substation - Install	\$	15,567,255
Indirect Costs	R. Marcy Substation - Install	\$	3,973,633
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitagation)	\$	9,589,464
	TOTAL INDIRECT	\$	122,977,383
	TOTAL ESTIMATED COST	. ¢	643.155.103

A. Transmission Line Edic to Princetown

Estimate Revision: 5 Total: \$ 159,021,649

NAT & NYPA - T025 - (Segment A	, + 765k	(V)		
		Supply	Installation	Total
A. Transmission Line Edic to Princetown				
1. CLEARING & ACCESS	\$	41,500	\$ 35,680,876	\$ 35,722,376
2. FOUNDATIONS	\$	3,098,282	\$ 10,723,946	\$ 13,822,229
3. STRUCTURES	\$	14,839,646	\$ 25,190,231	\$ 40,029,876
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	4,932,087	\$ 20,895,790	\$ 25,827,877
5. INSULATORS, FITTINGS, HARDWARE	\$	5,125,311	\$ 2,418,984	\$ 7,544,295
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	2,242,946	\$ 33,832,050	\$ 36,074,996
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	30,279,773	\$ 128,741,877	\$ 159,021,649
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	30,279,773	\$ 128,741,877	\$ 159,021,649

Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	oply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Trans	mission Line Edic to Princetown									
1. CLEARING &	ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	8.0	Acre	\$	-	\$ -	\$ 15,000	\$ 120,000	\$ 15,000	\$ 120,000
1.2	Clearing the ROW - Light (mowing)	194.0	Acre			\$ -	\$ 5,000	\$ 970,000	\$ 5,000	\$ 970,000
1.3	Permanent Access Road	70,540.8	LF	\$	-	\$ -	\$ 45	\$ 3,174,336	\$ 45	\$ 3,174,336
1.4	Silt Fence	352,704.0	LF	\$	-	\$ -	\$ 4	, ,		
1.5	Matting - Access and ROW	282,163.2	LF	\$	-	\$ -	\$ 70	, ,		. , ,
1.6	Matting - To Work Area	25,200.0	LF	\$	-	\$ -	\$ 70		\$ 70	
1.7	Snow Removal	66.8	Mile	\$	-	\$ -	\$ 16,000	\$ 1,068,800	\$ 16,000	
1.8	ROW Restoration	66.8	Mile	\$	-	\$ -	\$ 10,000	\$ 668,000	\$ 10,000	
1.9	Work Pads	1,680,000.0	SF	\$	-	\$ -	\$ 4	,,	\$ 4	,,
1.10	Restoration for Work Pad areas	336,000.0	SF	\$	-	\$ -	9 0.13		\$ 0	
1.11	Temporary Access Bridge	-	EA	\$	-	\$ - \$ -	\$ 20,035 \$ 14,445	\$ -	\$ 20,035 \$ 14,445	\$ - \$ -
1.12	Air Bridge Stabilized Construction Entrance	- 50	EA EA	\$ \$	-	\$ - \$ -	\$ 14,445	\$ 229,000	\$ 14,445 \$ 4,580	
1.13	Maintenance and Protection of Traffic on Public Roads	100	EA	\$	-	\$ - \$ -	\$ 4,580		\$ 4,580	
1.14	Culverts / Misc. Access	100	EA	Ś	750	\$ 7,500	\$ 1,250		\$ 2,000	\$ 20,000
1.16	Gates	17	EA	Ś	2,000	\$ 34,000	\$ 2,500			\$ 76,500
1.17	Concrete Washout Station	50	EA	Ś	-	\$ -	\$ 1,850		\$ 1,850	
	ING & ACCESS:	30	E) (<u> </u>		\$ 41,500	Ţ 1,030	\$ 35,680,876	7 2,050	\$ 35,722,376
2. FOUNDATIO						12,500		\$ 55,000,070		\$ 55,722,576
2.1	Direct Embed Foundations - 4' x 16'	416	EA	Ś	941	\$ 391,345	\$ 7,398	\$ 3,077,513	\$ 8,339	\$ 3,468,858
2.2	Direct Embed Foundations - 4' x 17'	2	EA	Ś	995	\$ 1,990	\$ 7,833	\$ 15,666	\$ 8,828	\$ 17,656
2.3	Direct Embed Foundations - 4' x 19'	52	EA	s	1,104	\$ 57,404	\$ 8,703			
2.4	Direct Embed Foundations - 4' x 21'	4	EA	Ś		\$ 4,851	\$ 9,574	\$ 38,295		\$ 43,146
2.5	Direct Embed Foundations - 4' x 23'	16	EA	Ś	1,322	\$ 21,144	\$ 10,444	\$ 167,105	\$ 11,766	\$ 188,249
2.6	Direct Embed Foundations - 4' x 25'	4	EA	Ś	1,430	\$ 5,721	\$ 11,314	\$ 45,258	\$ 12,745	\$ 50,979
2.7	Direct Embed Foundations - 6' x 18'	6	EA	\$	1,857		\$ 18,603	\$ 111,621		\$ 122,766
2.8	Direct Embed Foundations - 6' x 19'	6	EA	¢	1,952	\$ 11,711	\$ 19,583	\$ 117,496	\$ 21,534	\$ 129,207
2.9	Direct Embed Foundations - 6' x 20'	14	EA	\$	2,046	\$ 28,648	\$ 20,562	\$ 287,864		
2.10	Direct Embed Foundations - 6' x 21'	15	EA	Ś	2,141	\$ 32,110	\$ 21,541	\$ 323,113	\$ 23,681	\$ 355,222
2.11	Direct Embed Foundations - 6' x 22'	7	EA	Ś	2,235	\$ 15,645	\$ 22,520	\$ 157,640		\$ 173,285
			EA	\$	2,233	\$ 15,109	\$ 25,457	\$ 152,744	\$ 27,976	
2.12	Direct Embed Foundations - 6' x 25'	6		\$. ,		
2.13	Direct Embed Foundations - 6' x 26'	1	EA	\$,	\$ 2,613	\$ 26,437	-, -	\$ 29,049	\$ 29,049
2.14	Direct Embed Foundations - 6' x 28'	3	EA	\$	2,707		\$ 27,416			-
2.15	Direct Embed Foundations - 6' x 29'	3	EA	\$	2,896	\$ 8,687	\$ 29,374	\$ 88,122	\$ 32,270	\$ 96,809
2.16	Direct Embed Foundations - 6' x 33'	3	EA	\$	3,273	· · · · · · · · · · · · · · · · · · ·	\$ 33,290	\$ 99,871		\$ 109,691
2.17	Direct Embed Foundations - 7' x 27'	2	EA	\$	3,337	\$ 6,673	\$ 37,316	\$ 74,631	\$ 40,652	\$ 81,305
2.18	Direct Embed Foundations - 7' x 28'	1	EA	\$	3,452	\$ 3,452	\$ 38,648	\$ 38,648	\$ 42,101	\$ 42,101
2.19	Direct Embed Foundations - 7' x 49'	1	EA	Ś	5,880	\$ 5,880	\$ 66,635	\$ 66,635	\$ 72,515	\$ 72,515

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
2.20	Direct Embed Foundations - 7' x 61'	1	EA	\$	7,267	\$ 7,267	\$ 82,628	\$ 82,628	\$ 89,894	\$	89,894
2.21	Drilled Pier - 6' x 20'	54	EA	\$	18,064	\$ 975,459	\$ 18,261	\$ 986,079	\$ 36,325	\$	1,961,539
2.22	Drilled Pier - 7' x 19'	15	EA	\$	23,416	\$ 351,246	\$ 23,671	\$ 355,070	\$ 47,088	\$	706,315
2.23	Drilled Pier - 7' x 21'	12	EA	\$	25,758	\$ 309,096	\$ 26,038	\$ 312,461	\$ 51,796	\$	621,558
2.24	Drilled Pier - 7' x 22'	6	EA	\$	26,929	\$ 161,573	\$ 27,222	\$ 163,332	\$ 54,151	\$	324,905
2.26	Drilled Pier - 7' x 23'	3	EA	\$	28,100	\$ 84,299	\$ 28,406	\$ 85,217	\$ 56,505	\$	169,516
2.27	Drilled Pier - 7' x 33'	6	EA	\$	39,808	\$ 238,847	\$ 40,241	\$ 241,447	\$ 80,049	\$	480,295
2.28	Drilled Pier - 7' x 42'	3	EA	\$	50,345	\$ 151,036	\$ 50,893	\$ 152,680	\$ 101,239	\$	303,716
2.29	Drilled Pier - 8' x 27'	2	EA	\$	42,819	\$ 85,637	\$ 57,340	\$ 114,680	\$ 100,158	\$	200,317
2.30	Drilled Pier - 8' x 29'	2	EA	\$	45,877	\$ 91,754	\$ 61,436	\$ 122,871	\$ 107,313	\$	214,625
2.31	Rock Excavation Adder	1,342	СУ	\$	-	\$ -	\$ 2,000				2,684,000
TOTAL - FOUN	DATIONS:					\$ 3,098,282		\$ 10,723,946		\$	13,822,229
3. STRUCTURE	3										
3.1	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 115'	7	Structure	\$	50,024	\$ 350,168	\$ 30,014	\$ 210,101	\$ 80,038	\$	560,269
3.2	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 120'	4	Structure	\$	52,207	\$ 208,828	\$ 31,324	\$ 125,297	\$ 83,531	\$	334,125
3.3	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 130'	3	Structure	\$	58,257	\$ 174,770	\$ 34,954	\$ 104,862	\$ 93,210	\$	279,631
3.4	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 135'	10	Structure	\$	60,884	\$ 608,835	\$ 36,530	\$ 365,301	\$ 97,414	\$	974,136
3.5	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 145'	1	Structure	\$	64,473	\$ 64,473	\$ 38,684	\$ 38,684	\$ 103,156	\$	103,156
3.6	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 115'	1	Structure	\$	72,039	\$ 72,039	\$ 43,223	\$ 43,223	\$ 115,262	\$	115,262
3.7	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 130'	3	Structure	\$	85,082	\$ 255,245	\$ 51,049			_	408,391
3.8	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 135'	1	Structure	\$	92,278	\$ 92,278	\$ 55,367	\$ 55,367	\$ 147,645	\$	147,645
3.9	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$		\$ 116,328	\$ 69,797			_	186,125
3.10	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 120'	1	Structure	\$	127,558	\$ 127,558	\$ 76,535		\$ 204,092	_	204,092
3.11	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 150'	1	Structure	\$	208,033	\$ 208,033	\$ 124,820	\$ 124,820		_	332,852
3.12	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 160'	1	Structure	\$	238,595	\$ 238,595	\$ 143,157	\$ 143,157		\$	381,751
3.13	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 75'	1	Structure	Ś	-		\$ 14,685	\$ 14,685		_	39,161
3.14	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 80'	2	Structure	Ś	25,826	\$ 51,652	\$ 15,496		\$ 41,322		82,643
3.15	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 84'	169	Structure	Ś	29,526					_	7,983,830
3.16	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 89'	36	Structure	Ś						_	1,883,981
3.17	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 93'	23	Structure	Ś	34,540						1,271,054
3.18	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 98'	10	Structure	3	37,500	\$ 374,995	\$ 22,500			_	599,992
3.19	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 102'	4	Structure	Ś	43,901	\$ 175,602	\$ 26,340			_	280,963
3.20	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 107'	2	Structure	Ś	45,936	\$ 91,871	\$ 27,561	\$ 55,123		_	146,994
3.21	1-CKT 345KV H-FRAME MALL ANGLE (1°-15°) - 80'	2	Structure	Ś	55,241	\$ 110,482	\$ 33,145		\$ 88,386	_	176,771
3.22	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 85'	19		Ś			\$ 34,688	\$ 659,063			1,757,500
3.23		2	Structure	\$	61,050	\$ 1,098,438	\$ 36,630			_	1,757,300
	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 90'		Structure					,		_	
3.24	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 95'	2	Structure	\$	65,120	\$ 130,240	\$ 39,072	\$ 78,144	·		208,384
3.25 3.26	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 100'	1	Structure	\$	68,635	\$ 68,635	\$ 41,181 \$ 43,723	\$ 41,181		_	109,816
	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 105'	1	Structure		72,872					_	116,594
3.27	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 75'	2	Structure	\$	61,513	\$ 123,025	\$ 36,908		\$ 98,420	-	196,840
3.28	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80'	3	Structure	\$	69,079					_	331,579
3.29	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 85'	4	Structure	\$	75,739					_	484,730
3.30	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 90'	4	Structure	\$							521,552
3.31	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80'	1	Structure	\$	97,403	\$ 97,403	\$ 58,442	,	\$ 155,844		155,844
3.32	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 85'	6	Structure	\$,	\$ 634,809	\$ 63,481			_	1,015,694
3.33	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90'	6	Structure	\$	117,253				·	_	1,125,629
3.34	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95'	1	Structure	\$	129,408						207,052
3.35	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$	178,026		\$ 106,815	\$ 106,815		_	284,841
3.36	Remove Existing Foundation	50	EA	\$	-	\$ -	\$ 7,500	\$ 375,000		_	375,000
3.37	Remove Existing Structure and Accessories	994	EA	\$		\$ -	\$ 12,500			_	12,425,000
3.38	Install Grounding and Grounding Accessories	666	Pole	\$	506		\$ 5,539	\$ 3,688,641	\$ 6,045		4,025,637
TOTAL - STRUC						\$ 14,839,646		\$ 25,190,231		\$	40,029,876
	R, SHIELDWIRE, OPGW										
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	2,228,688	LF	\$	1.90					_	15,377,947
4.2	(1) OPGW 36 Fiber AC-33/38/571	301,594	LF	\$	1.35	\$ 407,152	\$ 5.00	\$ 1,507,970	\$ 6.35	i Ś	1,915,122

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
4.3	(1) 3/8" EHS7 Steel	271,656	LF	\$ 0.47	\$ 127,678	\$ 5.00	\$ 1,358,280	\$ 5.47	\$ 1,485,958
4.4									
4.5									
4.6									
4.7	Remove Existing Conductor and Accessories	121.0	Mile	\$ -	\$ -	\$ 30,000	\$ 3,630,000	\$ 30,000.00	\$ 3,630,000
4.8	Remove Existing OPGW and Accessories	108.4	Mile	\$ -	\$ -	\$ 12,000	\$ 1,300,800	,	\$ 1,300,800
4.9	Remove Existing OHSW and Accessories	108.4	Mile	\$ -	\$ -	\$ 12,000	\$ 1,300,800	\$ 12,000.00	\$ 1,300,800
4.10									
4.11									
4.12	21. 2.1. (127	22			4 452 750		4 225 500	å 5.250.00	4 400.000
4.13	Rider Poles (187 Locations)	93	Set	\$ 1,750	\$ 162,750	\$ 3,500		\$ 5,250.00	\$ 488,250
4.14	Rider Poles - Relocated UCTOR, SHIELDWIRE, OPGW:	94	Set	\$ -	\$ - \$ 4.932.087	\$ 3,500	\$ 329,000 \$ 20,895,790	\$ 3,500.00	\$ 329,000 \$ 25.827.877
					\$ 4,932,087		\$ 20,895,790		\$ 25,827,877
5. INSULATOR 5.1	, FITTINGS, HARDWARE	1,276	Assembly	\$ 1,800	\$ 2,296,800	\$ 720	\$ 918,720	\$ 2,520	\$ 3,215,520
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	480	Assembly	\$ 1,800	\$ 2,296,800	\$ 720	\$ 345,600		\$ 3,213,320
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	400		3 1,800	\$ 604,000	3 720	\$ 343,000	\$ 2,320	\$ 1,209,000
5.4	OPGW Assembly - Tangent	304	Assembly Assembly	\$ 200	\$ 60,800	\$ 150	\$ 45,600	7	\$ 106,400
5.5	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	64	Assembly	\$ 250	\$ 16,000	\$ 150			\$ 25,600
5.6	OHSW Assembly - Tangent	274	Assembly	\$ 200	\$ 54,800				
5.7	OHSW Assembly - Angle / DE	56	Assembly	\$ 250	\$ 14,000	\$ 150	\$ 8,400		\$ 22,400
5.8	OPGW Splice Boxes	27	Assembly	\$ 1,746	\$ 47,146	\$ 2,274			\$ 108,544
5.9	OPGW Splice & Test	27	EA	\$ 2,520	\$ 68,040	\$ 2,520	\$ 68,040	\$ 5,040	\$ 136,080
5.10	Spacer - Conductor	5,244	EA	\$ 50	\$ 262,200	\$ 35	\$ 183,540	\$ 85	\$ 445,740
5.11	Vibration Dampers - Conductor	4,164	EA	\$ 35	\$ 145,740	\$ 35	. ,	\$ 70	\$ 291,480
5.12	Shield wire / OPGW Dampers, Misc. Fittings	1,087	EA	\$ 27	\$ 29,349	\$ 35			\$ 67,394
5.13	Replace - Mono Pole Vertical Tangent (1-Group of 18-Bells Each Assembly)	480	Assembly	\$ 1,800	\$ 864,000	\$ 720	\$ 345,600		\$ 1,209,600
5.14	Replace - Dead-end & Angle Insulators (1, Group of 18-Bells Each Assembly)	195	Assembly	\$ 1,800	\$ 351,000	\$ 720	\$ 140,400	\$ 2,520	\$ 491,400
5.15	Guys, Anchors, and Accessories	-	EA	\$ 912	\$ -	\$ 1,058	\$ -	\$ 1,970	\$ -
5.16	Misc. materials (Signs and Markers)	66.8	Mile	\$ 770	\$ 51,436	\$ 1,006	\$ 67,201	\$ 1,776	\$ 118,637
TOTAL - INSUI	ATORS, FITTINGS, HARDWARE:				\$ 5,125,311		\$ 2,418,984		\$ 7,544,295
A. Trans	mission Line Edic to Princetown				\$ 28,036,826		\$ 94,909,827		\$ 122,946,653
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
O. IVICO/ DEIVI	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467
	Project Management, Material Handling & Amenities			-	7	7 -,,	,,	7	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 4,441,442	\$ 4,441,442	\$ 4,441,442	\$ 4,441,442
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 6,147,333			
6.6	LIDAR	1	LS	\$ -	\$ -	\$ 368,840			
6.7	Geotech	67	Location	\$ -	\$ -	\$ 3,500			\$ 234,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 860,627	\$ 860,627	\$ 860,627	\$ 860,627
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs			1.		_	_		
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	-	\$ -
6.12	Warranties / LOC's	1		\$ -	\$ -	\$ 368,840		, ,	\$ 368,840
6.13	Real Estate Costs (New ROW)	1		\$ -	\$ - \$ -	\$ -	\$ -		\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS LS	\$ -		\$ 8,640,000 \$ -			
6.15	Legal Fees Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -		\$ - \$ -	\$ -	·	\$ - \$ -
6.16	Allowance for Funds Osed During Construction (APODC)	-	LS	\$ -	\$ -	- ډ	٠ -	\$ -	· ·

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
6.17	Compensation for use of 1 Ckt - NYPA Structures (92 Structures)	1	LS	\$	-	\$ -	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123
6.18	Sales Tax on Materials	1	LS	\$	2,242,946	\$ 2,242,946	\$ -	\$ -	\$ 2,242,946	\$ 2,242,946
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 122,947	\$ 122,947	\$ 122,947	\$ 122,947
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 2,242,946		\$ 33,832,050		\$ 36,074,996

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A. TL Edic-Princetown

A1. Marcy Interconnect & New Scotland SS Loop

NAT & NYPA - T025 - (Segment A, + 765kV)		
	Total:	\$ 34,180,965

NAT & NYPA - T025 - (Segment	NAT & NYPA - T025 - (Segment A, + 765kV)											
		Supply Installation				Total						
A1. Marcy Interconnect & New Scotland SS Loop												
1. CLEARING & ACCESS	\$	-	\$	4,749,184	\$	4,749,184						
2. FOUNDATIONS	\$	5,113,108	\$	6,968,775	\$	12,081,883						
3. STRUCTURES	\$	3,973,368	\$	3,182,477	\$	7,155,845						
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	682,610	\$	1,278,833	\$	1,961,442						
5. INSULATORS, FITTINGS, HARDWARE	\$	706,655	\$	454,742	\$	1,161,397						
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	838,059	\$	6,233,155	\$	7,071,214						
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-						
SUBTOTAL:	\$	11,313,799	\$	22,867,166	\$	34,180,965						
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-						
TOTAL:	\$	11,313,799	\$	22,867,166	\$	34,180,965						

ption of		

Estimate Revision:

5

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Mate	terial Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
A1. Mar	cy Interconnect & New Scotland SS Loop											
1. CLEARING 8	ACCESS											
1.1	Clearing the ROW - Heavy (mowing & clearing)	98.0	Acre	\$	-	\$	-	\$ 15,000	\$ 1,470,000	\$ 15,000	\$	1,470,000
1.2	Clearing the ROW - Light (mowing)	2.0	Acre			\$	-	\$ 5,000	\$ 10,000	\$ 5,000	\$	10,000
1.3	Permanent Access Road	2,851.2	LF	\$	-	\$	-	\$ 45			_	128,304
1.4	Silt Fence	14,256.0	LF	\$	-	\$	-	\$ 4			\$	57,024
1.5	Matting - Access and ROW	11,404.8	LF	\$	-	\$	-	\$ 70			\$	798,336
1.6	Matting - To Work Area	25,200.0	LF	\$	-	\$	-	\$ 70			\$	1,764,000
1.7	Snow Removal	2.7	Mile	\$	-	\$	-	\$ 16,000	\$ 43,200			43,200
1.8	ROW Restoration	2.7	Mile	\$	-	\$	-	\$ 10,000				26,600
1.9	Work Pads	120,000.0	SF	\$	-	\$	-	\$ 4	, , , , , ,		\$	422,400
1.10	Restoration for Work Pad areas	24,000.0	SF	\$	-	\$	-	\$ 0.15	\$ 3,600	\$ 0.15	\$	3,600
1.11	Temporary Access Bridge	-	EA	\$	-	\$	-	\$ 20,035	\$ -	\$ 20,035		-
1.12	Air Bridge	-	EA	\$	-	\$	-	\$ 14,445		\$ 14,445		-
1.13	Stabilized Construction Entrance	4.0	EA	\$	-	\$	-	\$ 4,580		\$ 4,580	\$	18,320
1.14	Maintenance and Protection of Traffic on Public Roads	-	LS	\$	-	\$	-	\$ 300,000	\$ -	\$ 300,000	\$	-
1.15	Culverts / Misc. Access	-	EA	\$	750	\$	-	\$ 1,250	\$ -	\$ 2,000	\$	-
1.16	Gates	-	EA	\$	2,000	\$	-	\$ 2,500	\$ -	\$ 4,500	\$	-
1.17	Concrete Washout Station	4.0	EA	\$	-	\$	-	\$ 1,850	\$ 7,400	\$ 1,850	\$	7,400
TOTAL - CLEAF	RING & ACCESS:					\$	-		\$ 4,749,184		\$	4,749,184
2. FOUNDATIO	DNS											
2.1	1-CKT 765KV 3-POLE LARGE ANGLE DEADEND (INNER POLE)	2	EA	\$	130,812	\$	261,624	\$ 132,236	\$ 264,472	\$ 263,048	\$	526,096
2.2	1-CKT 765KV 3-POLE LARGE ANGLE DEADEND (OUTER POLE)	4	EA	\$	130,812	\$	523,248	\$ 132,236	\$ 528,944	\$ 263,048	\$	1,052,192
2.3	1-CKT 765KV 3-POLE MEDIUM ANGLE DEADEND (INNER POLE)	2	EA	\$	130,812	\$	261,624	\$ 132,236	\$ 264,472	\$ 263,048	\$	526,096
2.4	1-CKT 765KV 3-POLE MEDIUM ANGLE DEADEND (OUTER POLE)	4	EA	\$	130,812	\$	523,248	\$ 132,236	\$ 528,944	\$ 263,048	\$	1,052,192
2.5	1-CKT 765KV H-FRAME TANGENT	12	EA	\$	130,812	\$	1,569,743	\$ 132,236	\$ 1,586,833	\$ 263,048	\$	3,156,576
2.6	1-CKT 765KV 3-POLE LARGE ANGLE DEADEND (INNER POLE)	1	EA	\$	140,973	\$	140,973	\$ 142,508	\$ 142,508	\$ 283,481	\$	283,481
2.7	1-CKT 765KV 3-POLE LARGE ANGLE DEADEND (OUTER POLE)	2	EA	\$	140,973	\$	281,946	\$ 142,508	\$ 285,016	\$ 283,481	\$	566,961
2.8	1-CKT 765KV 3-POLE MEDIUM ANGLE DEADEND (INNER POLE)	1	EA	\$	140,973	\$	140,973	\$ 142,508	\$ 142,508	\$ 283,481	\$	283,481
2.9	1-CKT 765KV 3-POLE MEDIUM ANGLE DEADEND (OUTER POLE)	2	EA	\$	140,973	\$	281,946	\$ 142,508	\$ 285,016	\$ 283,481	\$	566,961
2.10	1-CKT 765KV H-FRAME TANGENT	8	EA	\$	140,973	\$	1,127,784	\$ 142,508	\$ 1,140,062	\$ 283,481	\$	2,267,846
2.11	Rock Excavation	900	СҮ	\$	-	\$	-	\$ 2,000	\$ 1,800,000	\$ 2,000	\$	1,800,000
2.12												
2.13												
2.14												
2.15												
TOTAL - FOUN	DATIONS:					\$	5,113,108		\$ 6,968,775		\$	12,081,883
3. STRUCTURE	is a second seco											
3.1	1-CKT 765KV 3-POLE LARGE ANGLE DEADEND	2	Structure	\$	255,540.50	\$	511,081	\$ 153,324.30	\$ 306,649	\$ 408,865	\$	817,730
		-		· · · ·	,	' ' 	- //		,			7 660

Item	Item Description	Estimated Quantity	Unit of Measure	Mat	erial Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
3.2	1-CKT 765KV 3-POLE MEDIUM ANGLE DEADEND	2	Structure	\$	255,540.50	\$ 511,081	\$ 153,324.30	\$ 306,649	\$ 408,865	\$ 817,730
3.3	1-CKT 765KV H-FRAME TANGENT	6	Structure	\$		\$ 1,533,243			\$ 408,865	\$ 2,453,189
3.4	1-CKT 765KV 3-POLE LARGE ANGLE DEADEND	1	Structure	\$	233,291.17		\$ 139,974.70			\$ 373,266
3.5	1-CKT 765KV 3-POLE MEDIUM ANGLE DEADEND	1	Structure	\$	233,291.17		\$ 139,974.70			\$ 373,266
3.6	1-CKT 765KV H-FRAME TANGENT	4	Structure	\$	233,291.17	\$ 933,165			\$ 373,266	
3.7	Remove Existing Structure and Accessories - Lattice	3	EA	\$	-		\$ 12,500		\$ 12,500	
3.8	Remove Existing Structure and Accessories - 3-Pole	3	EA	\$	-		\$ 37,500		\$ 37,500	
3.9	Remove Existing Structure and Accessories - H-Frame	11	EA	\$	-		\$ 12,500	\$ 137,500		\$ 137,500
3.10	Remove Existing Foundation	43	EA	\$	-		\$ 7,500 \$ 5.539			\$ 322,500
3.11	Install Grounding and Grounding Accessories	36	Pole	\$	506	\$ 18,216	\$ 5,539	\$ 199,386	\$ 6,045	\$ 217,602
3.13										
3.14				-						
3.15				 						
3.16										
3.17										
TOTAL - STRUC	CTURES:					\$ 3,973,368		\$ 3,182,477		\$ 7,155,845
	R, SHIELDWIRE, OPGW					7 2,012,000		-		7 1,200,010
4.1	765kV - (1) 1351.5kcmil 54/19 ACSR " <u>Martin</u> "	176,964	LF	\$	3.59	\$ 634,770	\$ 5.00	\$ 884,820	\$ 8.59	\$ 1,519,590
4.2	(1) OPGW 36 Fiber AC-33/38/571	14,747	LF	\$	1.35	\$ 19,909	\$ 5.00	\$ 73,736	\$ 6.35	\$ 93,645
4.3	(1) 3/8" EHS7 Steel	14,747	LF	\$	0.47	\$ 6,931	\$ 5.00			\$ 80,667
4.4	Remove Existing Conductor and Accessories	2.66	Mile	\$	-	\$ -	\$ 45,000	\$ 119,700	\$ 45,000.00	\$ 119,700
4.5	Remove Existing OPGW and Accessories	2.66	Mile	\$	-	\$ -	\$ 12,000	\$ 31,920	\$ 12,000.00	
4.6	Remove Existing OHSW and Accessories	2.66	Mile	\$	-	\$ -	\$ 12,000	\$ 31,920	\$ 12,000.00	\$ 31,920
4.7	Rider Poles	12	Set	\$	1,750	\$ 21,000	\$ 3,500		\$ 5,250.00	
4.8	Rider Poles - Relocated	6	Set	\$	-	\$ -	\$ 3,500	\$ 21,000	\$ 3,500.00	\$ 21,000
4.9										
4.10										
4.11				_						
4.12				-						
4.13 4.14										
4.14										
4.16										
4.17										
	UCTOR, SHIELDWIRE, OPGW:					\$ 682,610		\$ 1,278,833		\$ 1,961,442
	, FITTINGS, HARDWARE					,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
5.1	765kV Tangent (1-Group of 40-Bells Each Assembly)	60	Assembly	\$	4,000	\$ 240,000	\$ 1,440	\$ 86,400	\$ 5,440	\$ 326,400
5.2	765kV Dead-end & Angle Insulators (1-Group of 40-Bells Each Assembly)	90	Assembly	\$	4,000	\$ 360,000	\$ 1,440	\$ 129,600	\$ 5,440	\$ 489,600
5.3										\$ -
5.4	OPGW Assembly - Tangent	10	Assembly	\$	200	\$ 2,000	\$ 150	\$ 1,500	\$ 350	\$ 3,500
5.5	OPGW Assembly - Angle / DE	12	Assembly	\$	250	\$ 3,000	\$ 150			\$ 4,800
5.6	OHSW Assembly - Tangent	10	Assembly	\$	200		\$ 150		\$ 350	
5.7	OHSW Assembly - Angle / DE	12	Assembly	\$	250	,	\$ 150			\$ 4,800
5.8	OPGW Splice Boxes	4	Assembly	\$	1,746		\$ 2,274		\$ 4,020	
5.9	OPGW Splice & Test	4	EA EA	\$	2,520	\$ 10,080	\$ 2,520		,	\$ 20,160
5.10 5.11	Spacer - Conductor Vibration Dampers - Conductor	531 531	EA EA	\$	50 35	\$ 26,550 \$ 18,585	\$ 35 \$ 35		\$ 85 \$ 70	\$ 45,135 \$ 37,170
5.11	Shield wire / OPGW Dampers, Misc. Fittings	88	EA EA	\$	27		\$ 35		7	\$ 37,170
5.12	Splicing at existing 765kV DE	4	LS	\$	7,500				\$ 50,000	
5.14	Guys, Anchors, and Accessories	-	EA	\$	-		\$ 42,300	\$ 170,000		\$ 200,000
5.15	Misc. materials (Signs and Markers)	2.7	Mile	\$	770				\$ 1,776	
5.16		2.7		Ť	,,,	,073	,		,,,,,	,,,,,,,
5.17										
5.18										
5.19										
5.20										
TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:					\$ 706,655		\$ 454,742		\$ 1,161,397
	cy Interconnect & New Scotland SS Loop					\$ 10,475,740		\$ 16,634,011		\$ 27,109,751
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization			<u> </u>						
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 271,098	\$ 271,098	\$ 271,098	\$ 271,098

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 979,338	\$ 979,338	\$ 979,338	\$ 979,338
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 271,098	\$ 271,098	\$ 271,098	\$ 271,098
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 271,098	\$ 271,098	\$ 271,098	\$ 271,098
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 1,355,488	\$ 1,355,488	\$ 1,355,488	\$ 1,355,488
6.6	LIDAR	1	LS	\$ -	\$ -	\$ 81,329	\$ 81,329	\$ 81,329	\$ 81,329
6.7	Geotech	3	Location	\$ -	\$ -	\$ 3,500	\$ 10,500	\$ 3,500	\$ 10,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 189,768	\$ 189,768	\$ 189,768	\$ 189,768
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 81,329	\$ 81,329	\$ 81,329	\$ 81,329
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ 2,187,000	\$ 2,187,000	\$ 2,187,000	\$ 2,187,000
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 468,000	\$ 468,000	\$ 468,000	\$ 468,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 838,059	\$ 838,059	\$ -	\$ -	\$ 838,059	\$ 838,059
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 27,110	\$ 27,110	\$ 27,110	\$ 27,110
TOTAL - MOB,	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 838,059		\$ 6,233,155		\$ 7,071,214

B. Transmission Line Princetown to Rotterdam

Estimate Revision: Total: \$ 24,720,461

NAT & NYPA - T025 - (Segment A	, + 765	5kV)		
		Supply	Installation	Total
B. Transmission Line Princetown to Rotterdam				
1. CLEARING & ACCESS	\$	6,000	\$ 3,038,200	\$ 3,044,200
2. FOUNDATIONS	\$	417,002	\$ 3,778,708	\$ 4,195,711
3. STRUCTURES	\$	3,876,135	\$ 4,280,943	\$ 8,157,078
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	722,365	\$ 2,620,705	\$ 3,343,070
5. INSULATORS, FITTINGS, HARDWARE	\$	1,199,031	\$ 549,192	\$ 1,748,223
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	497,643	\$ 3,734,537	\$ 4,232,179
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	6,718,177	\$ 18,002,285	\$ 24,720,461
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	6,718,177	\$ 18,002,285	\$ 24,720,461

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply R	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
B. Transı	mission Line Princetown to Rotterdam										
1. CLEARING &	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	- \$	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	24.0	Acre	\$	- \$	\$ -	\$ 5,000	\$ 120,000	\$ 5,000	ļ .	120,000
1.3	Permanent Access Road	5,280	LF	7	- \$	т	\$ 45		\$ 45		237,600
1.4	Silt Fence	26,400	LF	Y	- \$		\$ 4			\$	105,600
1.5	Matting - Access and ROW	21,120	LF	7	- \$		\$ 70		\$ 70		1,478,400
1.6	Matting - To Work Area	2,775	LF		- \$	T	\$ 70		\$ 70		194,250
1.7	Snow Removal	5	Mile	7	- \$		\$ 16,000				80,000
1.8	ROW Restoration	5	Mile	т	. \$	T	\$ 10,000	\$ 50,000	\$ 10,000		50,000
1.9	Work Pads	185,000	SF SF	· ·	· \$		\$ 4	,		\$	651,200
1.10	Restoration for Work Pad areas	37,000	SF EA	т	·	T	\$ 0.2 \$ 20,035	\$ 5,550 \$ -	\$ 20,035	\$	5,550
1.11	Temporary Access Bridge Air Bridge	-	EA	· ·	. 5	т	\$ 20,035	\$ -	\$ 20,033		-
1.12	Stabilized Construction Entrance	10	EA	7	· Ş	7	\$ 4,580	\$ 45,800	\$ 4,580		45,800
1.13	Maintenance and Protection of Traffic on Public Roads	10	EA	7	. s	т	\$ 4,130		\$ 4,130		41,300
1.15	Gates	-	EA	Y	000 \$		\$ 2,500		\$ 4,500		41,300
1.16	Culverts / Misc. Access	8	EA		750 \$				\$ 2,000		16,000
1.17	Concrete Washout Station	10	EA	-	. \$		\$ 1,850		\$ 1,850		18,500
	ING & ACCESS:	10	271	Ť	Ś		7 1,050	\$ 3,038,200	Ψ 1,030	Ś	3,044,200
2. FOUNDATIO	ONS					,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
2.1	Direct Embed Foundations - 6' x 18'	56	EA	\$ 1,8	357 \$	\$ 104,018	\$ 18,603	\$ 1,041,794	\$ 20,461	\$	1,145,812
2.2	Direct Embed Foundations - 6' x 20'	4	EA	\$ 2,0)46 \$	\$ 8,185	\$ 20,562	\$ 82,247	\$ 22,608	\$	90,432
2.3	Direct Embed Foundations - 6' x 22'	8	EA	\$ 2,2	35 \$	\$ 17,880	\$ 22,520	\$ 180,160	\$ 24,755	\$	198,040
2.4	Direct Embed Foundations - 7' x 25'	4	EA	\$ 3,:	.05 \$	\$ 12,422	\$ 34,650	\$ 138,601	\$ 37,756	\$	151,023
2.5	Drilled Pier - 6' x 19'	6	EA	\$ 17,2	204 \$	\$ 103,223	\$ 17,391	\$ 104,347	\$ 34,595	\$	207,570
2.6	Drilled Pier - 8' x 27'	4	EA	\$ 42,8	\$19 \$	\$ 171,274	\$ 57,340	\$ 229,359	\$ 100,158	\$	400,633
2.7	Rock Excavation Adder	1,001.1	СУ	\$	- \$	\$ -	\$ 2,000	\$ 2,002,200	\$ 2,000	\$	2,002,200
TOTAL - FOUN	DATIONS:				\$	\$ 417,002		\$ 3,778,708		\$	4,195,711
3. STRUCTURE	S										
3.1	2x 1-CKT 345KV DELTA TANGENT (0°-1°) - 115'	24	Structure	\$ 85,5	44 \$	\$ 2,053,056	\$ 51,326	\$ 1,231,834	\$ 136,870	\$	3,284,890
3.2	2x 1-CKT 345KV DELTA TANGENT (0°-1°) - 135'	2	Structure	\$ 106,0	005 \$	\$ 212,010	\$ 63,603	\$ 127,206	\$ 169,608	\$	339,216
3.3	2x 1-CKT 345KV DELTA SMALL ANGLE (1°-15°) - 115'	2	Structure	\$ 141,6	573 \$	\$ 283,346	\$ 85,004	\$ 170,008	\$ 226,677	\$	453,354
3.4	2x 1-CKT 345KV VERTICAL TANGENT DEADEND (0°-5°) - 115'	4	Structure	\$ 109,8	316 \$	\$ 439,264	\$ 65,890	\$ 263,558	\$ 175,706	\$	702,822
3.5	2x 1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	2	Structure	\$ 232,6	556 \$	\$ 465,312	\$ 139,594	\$ 279,187	\$ 372,250	\$	744,499
3.6	2x 1-CKT 345KV 3-POLE LARGE ANGLE DEADEND (60°-90°) - 115'	1	Structure	\$ 176,3	342 \$	\$ 176,342	\$ 105,805	\$ 105,805	\$ 282,147	\$	282,147
3.7	2x 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 65′	1	Structure	\$ 99,4	193 \$	\$ 99,493	\$ 59,696	\$ 59,696	\$ 159,189	\$	159,189

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.8	2x 1-CKT 345KV DELTA TANGENT (0°-1°) HD- 115'	1	Structure	\$ 105,820	\$ 105,820	\$ 63,492	\$ 63,492	\$ 169,312	\$ 169,312
3.9	Remove Existing Foundation	22	EA	\$ -	\$ -	\$ 7,500	\$ 163,500	\$ 7,500	\$ 163,500
3.10	Remove Existing Structure and Accessories	109	EA	\$ -	\$ -	\$ 12,500	\$ 1,362,500	\$ 12,500	\$ 1,362,500
3.11	Install Grounding and Grounding Accessories	82	Pole	\$ 506	\$ 41,492	\$ 5,539	\$ 454,157	\$ 6,045	\$ 495,649
TOTAL - STRU	ICTURES PRINCTOWN TO NEW SCOTLAND:				\$ 3,876,135		\$ 4,280,943		\$ 8,157,078
4. CONDUCT	OR, SHIELDWIRE, OPGW								
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (R1 - R36)	339,293	LF	\$ 1.90	\$ 644,657	\$ 5.00	\$ 1,696,465	\$ 6.90	\$ 2,341,122
4.2	(1) OPGW 36 Fiber AC-33/38/571 (R1 - R36)	28,274	LF	\$ 1.35	\$ 38,170	\$ 5.00	\$ 141,370	\$ 6.35	\$ 179,540
4.3	(1) 3/8" EHS7 Steel (R1 - R36)	28,274	LF	\$ 0.47	\$ 13,289	\$ 5.00	\$ 141,370	\$ 5.47	\$ 154,659
4.5	Remove Existing Conductor and Accessories	10.0	Mile	\$ -	\$ -	\$ 30,000	\$ 300,000	\$ 30,000.00	\$ 300,000
4.6	Remove Existing OPGW and Accessories	10.0	Mile	\$ -	\$ -	\$ 12,000	\$ 120,000	\$ 12,000.00	\$ 120,000
4.7	Remove Existing OHSW and Accessories	10.0	Mile	\$ -	\$ -	\$ 12,000	\$ 120,000	\$ 12,000.00	\$ 120,000
4.8	Rider Poles	15	EA	\$ 1,750	\$ 26,250	\$ 3,500	\$ 52,500	\$ 5,250.00	\$ 78,750
4.9	Rider Poles - Relocated	14	Set	\$ -	\$ -	\$ 3,500	\$ 49,000	\$ 3,500.00	\$ 49,000
TOTAL: CONI	DUCTOR, SHIELDWIRE, OPGW:				\$ 722,365		\$ 2,620,705		\$ 3,343,070
5. INSULATO	R, FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	348	Assembly	\$ 1,800	\$ 626,400	\$ 720	\$ 250,560	\$ 2,520	\$ 876,960
5.2	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	240	Assembly	\$ 1,800	\$ 432,000	\$ 720	\$ 172,800	\$ 2,520	\$ 604,800
5.3	OPGW Assembly - Tangent	29	Assembly	\$ 200	\$ 5,800	\$ 150	\$ 4,350	\$ 350	\$ 10,150
5.4	OPGW Assembly - Angle / DE	16	Assembly	\$ 250	\$ 4,000	\$ 150	\$ 2,400	\$ 400	\$ 6,400
5.5	OHSW Assembly - Tangent	29	Assembly	\$ 200	\$ 5,800	\$ 150	\$ 4,350	\$ 350	\$ 10,150
5.6	OHSW Assembly - Angle / DE	16	Assembly	\$ 250	\$ 4,000	\$ 150	\$ 2,400	\$ 400	\$ 6,400
5.7	OPGW Splice Boxes	8	Assembly	\$ 1,746	\$ 13,969	\$ 2,274	\$ 18,192	\$ 4,020	\$ 32,161
5.8	OPGW Splice & Test	8	EA	\$ 2,520	\$ 20,160	\$ 2,520	\$ 20,160	\$ 5,040	\$ 40,320
5.9	Spacer - Conductor	1,002	EA	\$ 50	\$ 50,100	\$ 35	\$ 35,070		\$ 85,170
5.10	Vibration Dampers - Conductor	852	EA	\$ 35	\$ 29,820	\$ 35	\$ 29,820		\$ 59,640
5.11	Shieldwire / OPGW Dampers, Misc. Fittings	116	EA	\$ 27	\$ 3,132	\$ 35	\$ 4,060		\$ 7,192
5.12	Guys, Anchors, and Accessories	-	EA	\$ 912	\$ -	\$ 1,058	\$ -		\$ -
5.13	Misc. materials (Signs and Markers)	5.0	Mile	\$ 770	\$ 3,850	\$ 1,006	\$ 5,030		\$ 8,880
	ILATORS, FITTINGS, HARDWARE:	3.0	Wille	7 770	\$ 1,199,031	ý 1,000	\$ 549,192	3 1,770	\$ 1,748,223
	smission Line Princetown to Rotterdam				\$ 6,220,534		\$ 14,267,748		\$ 20,488,282
6. MOB/DEN	IOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS								
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 204,883	\$ 204,883	\$ 204,883	\$ 204,883
	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost								
6.2	Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 740,138		· ·	\$ 740,138
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 204,883	\$ 204,883		\$ 204,883
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 204,883	\$ 204,883	\$ 204,883	\$ 204,883
6.5	Engineering Design Engineering	1	LS	\$ -	\$ -	\$ 1,024,414	\$ 1,024,414	\$ 1,024,414	\$ 1,024,414
	Design Engineering			· .	7				
6.6	LiDAR Geotech	5	LS	\$ - \$ -	\$ - \$ -	\$ 61,465 \$ 3,500	\$ 61,465 \$ 17,500	\$ 61,465 \$ 3,500	\$ 61,465 \$ 17,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	, ,,,,,,	\$ 143,418	,	\$ 143,418
0.0	Testing & Commissioning			,	,	7 143,410	7 143,410	Ţ 143,410	, 143,410
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
0.5	Permitting and Additional Costs	1	LJ	· ·	· ·	y 40,000	÷ +0,000	40,000	0,000
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -			\$ -		\$ -
6.12	Warranties / LOC's	1	LS	\$ -		\$ 61,465	\$ 61,465		
6.13	Real Estate Costs (New ROW)	1		\$ -		\$ -	\$ -		\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -			\$ 1,011,000		
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
6.17			LS	\$ -			\$ -		\$ -
6.18	Sales Tax on Materials	1	LS	\$ 497,643	\$ 497,643	\$ -	\$ -		\$ 497,643

	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 20,488	\$ 20,488	\$ 20,488	\$ 20,488
TC	TAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 497,643		\$ 3,734,537		\$ 4,232,179

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B. TL Princetown-Rotterdam

C. Transmission Line Princetown to New Scotland

Estimate Revision: 5 Total: \$ 47,048,794

NAT & NYPA - T025 - (Segment A, + 765kV)											
		Supply		Installation		Total					
C. Transmission Line Princetown to New Scotland											
1. CLEARING & ACCESS	\$	31,000	\$	11,223,694	\$	11,254,694					
2. FOUNDATIONS	\$	1,194,705	\$	4,499,949	\$	5,694,653					
3. STRUCTURES	\$	6,879,617	\$	5,578,039	\$	12,457,656					
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	1,564,842	\$	4,756,290	\$	6,321,132					
5. INSULATORS, FITTINGS, HARDWARE	\$	1,767,073	\$	847,291	\$	2,614,365					
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	914,979	\$	7,791,316	\$	8,706,295					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-					
SUBTOTAL:	\$	12,352,215	\$	34,696,579	\$	47,048,794					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	\$	12,352,215	\$	34,696,579	\$	47,048,794					

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Trans	mission Line Princetown to New Scotland								
1. CLEARING 8	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	26.0	Acre	\$ -	\$ -	\$ 15,000	\$ 390,000	\$ 15,000	\$ 390,000
1.2	Clearing the ROW - Light (mowing)	57.0	Acre	\$ -	\$ -	\$ 5,000	\$ 285,000	\$ 5,000	\$ 285,000
1.3	Permanent Access Road	20,803.2	LF	\$ -	\$ -	\$ 45			\$ 936,144
1.4	Silt Fence	104,016.0	LF	\$ -	\$ -		\$ 416,064		\$ 416,064
1.5	Matting - Access and ROW	83,212.8	LF	\$ -	\$ -	\$ 70		\$ 70	\$ 5,824,896
1.6	Matting - To Work Area	3,375.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	19.7	Mile	\$ -	\$ -	\$ 16,000			\$ 315,200
1.8	ROW Restoration	19.7	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	645,000.0	SF	\$ -	\$ -	\$ 4	\$ 2,270,400		\$ 2,270,400
1.10	Restoration for Work Pad areas	129,000.0	SF	\$ -	\$ -	\$ 0.2			\$ 19,350
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	2	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	\$ 28,890
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580		\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	50	EA	\$ -	\$ -	\$ 4,130		\$ 4,130	\$ 206,500
1.15	Gates	11	EA	\$ 2,000	\$ 22,000	\$ 2,500	\$ 27,500	\$ 4,500	\$ 49,500
1.16	Culverts / Misc. Access	12	EA	\$ 750	\$ 9,000	\$ 1,250	\$ 15,000	\$ 2,000	\$ 24,000
1.17	Concrete Washout Station	30	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	\$ 55,500
TOTAL - CLEA	RING & ACCESS:				\$ 31,000		\$ 11,223,694		\$ 11,254,694
2. FOUNDATION	DNS								
2.1	Direct Embed Foundations - 4' x 16'	100	EA	\$ 941	\$ 94,073	\$ 7,398	\$ 739,787	\$ 8,339	\$ 833,860
2.2	Direct Embed Foundations - 4' x 19'	14	EA		\$ 15,455				
2.3	Direct Embed Foundations - 4' x 21'	2	EA	\$ 1,213					
2.4	Direct Embed Foundations - 6' x 18'	9	EA	\$ 1,857					
2.5	Direct Embed Foundations - 6' x 20'	14	EA	\$ 2,046					
2.6	Direct Embed Foundations - 6' x 21'	25	EA		\$ 53,516				\$ 592,037
2.7	Direct Embed Foundations - 6' x 22'	4	EA	\$ 2,235					
2.8	Direct Embed Foundations - 6' x 25'	5	EA	\$ 2,518					
2.9	Direct Embed Foundations - 6' x 29'	1	EA	\$ 2,896	\$ 2,896				
2.10	Direct Embed Foundations - 6' x 34'	4	EA	\$ 3,273					\$ 146,255
2.11	Direct Embed Foundations - 6' x 42'	3	EA	\$ 4,123	\$ 12,369			, .	\$ 138,676
2.12	Direct Embed Foundations - 7' x 25'	1	EA						
2.13	Direct Embed Foundations - 7' x 27'	1	EA	\$ 3,337					
2.14	Direct Embed Foundations - 7' x 28'	1	EA	\$ 3,452	\$ 3,452			\$ 42,101	\$ 42,101
2.15	Drilled Pier - 6' x 20'	6	EA	\$ 18,064	\$ 108,384				
2.16	Drilled Pier - 7' x 19'	15	EA	\$ 23,416					\$ 706,315
2.17	Drilled Pier - 7' x 24'	3	EA	\$ 29,270					\$ 176,579
2.18	Drilled Pier - 8' x 27'	1	EA	\$ 42,819					\$ 86,103
2.19	Drilled Pier - 8' x 83'	1	EA	\$ 128,456	\$ 128,456	\$ 172,020	\$ 172,020	\$ 300,475	\$ 300,475

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.20	Drilled Pier - 8' x 89'	1	EA	\$ 137,631	\$ 137,631	\$ 184,307	\$ 184,307	\$ 321,938	\$ 321,938
2.21	Drilled Pier - 9' x 34'	1	EA	\$ 67,740	\$ 67,740	\$ 90,713	\$ 90,713	\$ 158,454	\$ 158,454
2.22		-		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.23	Rock Excavation Adder (20% of Excavation)	482.40	СУ	\$ -	\$ -	\$ 2,000	\$ 964,800	\$ 2,000	\$ 964,800
TOTAL - FOU	NDATIONS:				\$ 1,194,705		\$ 4,499,949		\$ 5,694,653
3. STRUCTUR	ES								
3.1	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 115'	7	Structure	\$ 50,024	\$ 350,168	\$ 30,014	\$ 210,101		\$ 560,269
3.2	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 120'	5	Structure	\$ 52,207		\$ 31,324			
3.3	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 125'	8	Structure	\$ 55,685		\$ 33,411	\$ 267,288		\$ 712,768
3.4	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 130'	9	Structure	\$ 58,257	\$ 524,309	\$ 34,954	\$ 314,585		\$ 838,894
3.5	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 135'	4	Structure	\$ 60,884		\$ 36,530			
3.6	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 145'	1	Structure	\$ 64,473		\$ 38,684	\$ 38,684		
3.7	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 115'	1	Structure	\$ 72,039		\$ 43,223			
3.8	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 135'	1	Structure	\$ 92,278 \$ 58,164	\$ 92,278	\$ 55,367	\$ 55,367 \$ 34.898		
3.10	1-CKT 345KV VERTICAL TANGENT DEADEND (0°-5°) - 120'	1	Structure	\$ 58,164 \$ 98,883	\$ 58,164 \$ 98,883	\$ 34,898 \$ 59,330	\$ 34,898 \$ 59,330		
3.10	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 105' 1-CKT 345KV H-FRAME TANGENT (0°-1°) - 84'	43	Structure Structure	\$ 98,883		\$ 59,330			
3.12	1-CKT 345KV H-FRAME TANGENT (0 -1) - 84 1-CKT 345KV H-FRAME TANGENT (0°-1°) - 89'	5	Structure	\$ 29,326					
3.13	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 93'	5	Structure	\$ 34,540		\$ 20,724			·
3.14	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 107'	5	Structure	\$ 45,936		\$ 27,561			
3.15	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 80'	3	Structure	\$ 55,241		\$ 33,145	\$ 99,434		
3.16	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80'	5	Structure	\$ 69,079		\$ 41,447			
3.17	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 85'	1	Structure	\$ 75,739		\$ 45,443	\$ 45,443		
3.18	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80'	5	Structure	\$ 97,403	\$ 487,013	\$ 58,442	\$ 292,208		\$ 779,220
3.19	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95'	1	Structure	\$ 129,408	\$ 129,408	\$ 77,645	\$ 77,645		\$ 207,052
3.20	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$ 178,026		\$ 106,815	\$ 106,815		
3.21	2-CKT 115KV/345KV VERTICAL TANGENT (0°-1°) - 115'	7	Structure	\$ 54,631		\$ 32,778			
3.22	2-CKT 115KV/345KV VERTICAL TANGENT (0°-1°) - 125'	4	Structure	\$ 62,604	\$ 250,416	\$ 37,562	\$ 150,250	\$ 100,166	\$ 400,666
3.23	2-CKT 115KV/345KV VERTICAL TANGENT (0°-1°) - 135'	1	Structure	\$ 68,894	\$ 68,894	\$ 41,336	\$ 41,336	\$ 110,230	\$ 110,230
3.24	2-CKT 115KV/345KV VERTICAL SMALL ANGLE (1°-15°) - 155'	1	Structure	\$ 149,480	\$ 149,480	\$ 89,688	\$ 89,688	\$ 239,168	\$ 239,168
3.25	2-CKT 115KV/345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$ 173,808	\$ 173,808	\$ 104,285	\$ 104,285		
3.26	2-CKT 115KV/345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 125'	1	Structure	\$ 202,797	\$ 202,797	\$ 121,678	\$ 121,678		\$ 324,475
3.27	115KV DUMMY DE, Drilled Pier, 85'	2	Structure	\$ 58,164	\$ 116,328	\$ 34,898	\$ 69,797	\$ 93,062	\$ 186,125
3.28	Remove Existing Foundation	4	EA	\$ -	\$ -	\$ 7,500	\$ 30,000		\$ 30,000
3.29	Remove Existing Structure and Accessories	24	EA	\$ -	\$ -	\$ 12,500	\$ 300,000	\$ 12,500	\$ 300,000
3.30	Install Grounding and Grounding Accessories	214	Pole	\$ 506	\$ 108,284	\$ 5,539	\$ 1,185,239	\$ 6,045	\$ 1,293,523
TOTAL - STRU	ICTURES:				\$ 6,879,617		\$ 5,578,039		\$ 12,457,656
4. CONDUCT	OR, SHIELDWIRE, OPGW								
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (ENS-336 to ENS-464)	661,954	LF	\$ 1.90		· ·	\$ 3,309,770		\$ 4,567,483
4.2	(1) OPGW 36 Fiber AC-33/38/571 (ENS-336 to ENS-464)	110,326	LF	\$ 1.35	\$ 148,940	\$ 5.00	\$ 551,630	\$ 6.35	\$ 700,570
4.3	(1) 3/8" EHS7 Steel (ENS-336 to ENS-464)	75,398	LF	\$ 0.47	\$ 35,437	\$ 5.00	\$ 376,990	\$ 5.47	\$ 412,427
4.4		-		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.5	115kV - (1) 954kcmil 54/7 ACSS "Cardinal" (ENS-336 to ENS-464)	41,580	LF	\$ 1.90	\$ 79,002	\$ 5.00	\$ 207,900	\$ 6.90	\$ 286,902
4.6	(1) OPGW 36 Fiber AC-33/38/571 (ENS-336 to ENS-464)	-	LF	\$ 1.35		\$ 5.00		\$ 6.35	
4.7	(1) 3/8" EHS7 Steel (ENS-336 to ENS-464)	_	LF	\$ 0.47	\$ -	\$ 5.00	\$ -	\$ 5.47	\$ -
4.8	Remove Existing Conductor and Accessories	2.5	Mile	\$ -	\$ -	\$ 30,000	\$ 75,000	Ŧ	\$ 75,000
4.8	Remove Existing Conductor and Accessories Remove Existing OPGW and Accessories	2.5	Mile	\$ -	\$ -	\$ 30,000			\$ 30,000
	9				'	, , , , , , , , , , , , , , , , , , , ,			
4.10	Remove Existing OHSW and Accessories	2.5	Mile	\$ -		\$ 12,000			
4.11	Rider Poles (50 Locations)	25	Set	\$ 1,750					<u> </u>
4.12	Rider Poles - Relocated	25	Set	\$ -		\$ 3,500		\$ 3,500.00	\$ 87,500
	DUCTOR, SHIELDWIRE, OPGW:				\$ 1,564,842		\$ 4,756,290		\$ 6,321,132
	R, FITTINGS, HARDWARE				4 000 :		4 207	4 2	A 4000
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	538	Assembly	\$ 1,800					
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	78	Assembly	\$ 900					
5.3 5.4	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	255 21	Assembly	\$ 1,800 \$ 900		\$ 720 \$ 560			
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	21	Assembly	900	10,900 ب	000 پ	11,/60	\$ 1,460	\$ 30,660
5.5				1					

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.6									
5.7	OPGW Assembly - Tangent	110	Assembly	\$ 200		\$ 150			
5.8	OPGW Assembly - Angle / DE	34	Assembly	\$ 250	\$ 8,500	,	\$ 5,100	\$ 400	\$ 13,60
5.9	OHSW Assembly - Tangent	61	Assembly	\$ 200	\$ 12,200	7	\$ 9,150		\$ 21,35
5.10	OHSW Assembly - Angle / DE	24	Assembly	\$ 250			\$ 3,600	·	\$ 9,60
5.11	OPGW Splice Boxes	8	Assembly	\$ 1,746	1 -,	\$ 2,274		, , , ,	\$ 32,16
5.12	OPGW Splice & Test	8	EA	\$ 2,520		\$ 2,520		· , , , , , , , , , , , , , , , , , , ,	
5.13	Spacer - Conductor	1,773	EA	\$ 50		\$ 35			
5.14	Vibration Dampers - Conductor	1,596	EA	\$ 35	\$ 55,860	\$ 35	\$ 55,860	\$ 70	\$ 111,72
5.15	Shieldwire / OPGW Dampers, Misc. Fittings	293	EA	\$ 27	\$ 7,911	\$ 35	\$ 10,255	\$ 62	\$ 18,16
5.16	Guys, Anchors, and Accessories	-	EA	\$ 912	\$ -	\$ 1,058	\$ -	\$ 1,970	\$ -
5.17	Misc. materials (Signs and Markers)	19.9	Mile	\$ 770	\$ 15,323	\$ 1,006	\$ 20,019	\$ 1,776	\$ 35,34
OTAL - INSU	LATORS, FITTINGS, HARDWARE:				\$ 1,767,073		\$ 847,291		\$ 2,614,36
. Trans	mission Line Princetown to New Scotland				\$ 11,437,237		\$ 26,905,263		\$ 38,342,49
MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 383,425	\$ 383,425	\$ 383,425	\$ 383,42
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 1,385,121	\$ 1,385,121	\$ 1,385,121	\$ 1,385,12
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 383,425	\$ 383,425	\$ 383,425	\$ 383,42
6.4	Site Accommodation, Facilities, Storage	1	LS	Ś -	\$ -	. ,	\$ 383,425		
	Engineering		-						
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 1,917,125	\$ 1,917,125	\$ 1,917,125	\$ 1,917,12
6.6	Lidar	1	LS	\$ -	\$ -	\$ 115,027	\$ 115,027	\$ 115,027	\$ 115,02
6.7	Geotech	20	Location	\$ -	\$ -	\$ 3,500	\$ 70,000	\$ 3,500	\$ 70,00
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 268,397	\$ 268,397	\$ 268,397	\$ 268,39
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,00
	Permitting and Additional Costs							· · · · · · · · · · · · · · · · · · ·	,
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 115,027	\$ 115,027	\$ 115,027	\$ 115,02
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ 215,000	\$ 215,000	\$ 215,000	\$ 215,00
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 2,477,000	\$ 2,477,000	\$ 2,477,000	
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	_	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 914,979	\$ 914,979	\$ -	\$ -	\$ 914,979	\$ 914,97
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS	7 517,575	\$ 514,575	\$ 38,342	т		\$ 38,34
0.23	I/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 914,979	· , , , , , , , , , , , , , , , , , , ,	\$ 7,791,316	+ 55,542	\$ 8,706,29

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C. TL Princetown-New Scotland

D. Rotterdam Substation - Install

Estimate Revision: 5 Total: \$ 53,079,207

NAT & NYPA - T025 - (Segment A, + 765kV)										
	Sup	ply	Installation		Total					
D. Rotterdam Substation - Install										
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,896,891	\$ 7,053,255	\$	9,950,146					
2. SUBSTATION FOUNDATIONS	\$	2,443,003	\$ 2,616,200	\$	5,059,203					
3. SUBSTATION STRUCTURES	\$	944,980	\$ 944,980	\$	1,889,960					
4. MAJOR EQUIPTMENT	\$	11,915,000	\$ 2,970,000	\$	14,885,000					
5. SMALL EQUIPTMENT / MATERIALS	\$	1,994,540	\$ 1,060,500	\$	3,055,040					
6. CONTROL HOUSE / PANELS	\$	2,927,500	\$ 1,477,500	\$	4,405,000					
7. MISC ITEMS	\$	1,441,675	\$ 2,331,950	\$	3,773,625					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,965,087	\$ 8,096,146	\$	10,061,233					
CONTRACTOR MARK-UP (OH&P)	\$		\$ -	\$						
SUBTOTAL:	\$	26,528,676	\$ 26,550,531	\$	53,079,207					
CONTINGENCY ON ENTIRE PROJECT	\$		\$ -	\$						
TOTAL:	\$	26,528,676	\$ 26,550,531	\$	53,079,207					

Item	ltem Description	Estimated Quantity	Unit of Measure	Mai	terial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit	Rate	TOTAL
D. Rotte	rdam Substation - Install										
1. SITE PREP/ C	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	3.9	ACRES	\$	-	\$ -	\$ 203,000	\$ 786,625	\$	203,000	\$ 786,625
1.2	Station stone within substation fence.	3,175	СУ	\$	27	\$ 85,725	\$ 75	\$ 238,125	\$	102	\$ 323,850
1.3	Substation Fence	2,130	LF	\$	100	\$ 213,000	\$ 100	\$ 213,000	\$	200	\$ 426,000
1.4	Retaining Wall (1065' x 13')	1	LS	\$	406,755	\$ 406,755	\$ 925,345	\$ 925,345	\$ 1,	332,100	\$ 1,332,100
1.5	Compacted Fill (124,583cy Sand)	124,583	CY	\$	17	\$ 2,117,911	\$ 20	\$ 2,491,660	\$	37	\$ 4,609,571
1.6	Permanent Access Road - 20'-Wide (From Gordon RD)	2,100	LF	\$	35	\$ 73,500	\$ 285	\$ 598,500	\$	320	\$ 672,000
1.7	Natural Gas Transmission Line Relocation	1	LS	\$	-	\$ -	\$ 1,800,000	\$ 1,800,000	\$ 1,	800,000	\$ 1,800,000
1.8											
1.9											
1.10											
1.11											
1.12											
1.13											
1.14											
1.15											
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 2,896,891		\$ 7,053,255			\$ 9,950,146
2. SUBSTATION	FOUNDATIONS										
2.1	345kV										
2.1a	Circuit Breaker Foundations	8	EA	\$	14,940	\$ 119,520	\$ 16,000	\$ 128,000	\$	30,940	\$ 247,520
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$	116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	32	EA	\$	26,145	\$ 836,640	\$ 28,000	\$ 896,000	\$	54,145	\$ 1,732,640
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$	54,145	\$ -
2.1e	Switch Stand Foundations	102	EA	\$	4,482	\$ 457,164	\$ 4,800	\$ 489,600	\$	9,282	\$ 946,764
2.1f	Station Service Transformer Stand Foundation	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$	9,282	\$ 9,282
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$	-	\$ -
2.1h	Bus Support 1 Ph Foundations	42	EA	\$	4,482	\$ 188,244	\$ 4,800	\$ 201,600	\$	9,282	\$ 389,844
2.1j	Instrument Transformer Stand Foundations	33	EA	\$	4,482	\$ 147,906	\$ 4,800	\$ 158,400	\$	9,282	\$ 306,306
2.1k	Arrester Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$	9,282	\$ 55,692
2.1m	Wave Trap Stand Foundations	2	EA	\$	4,482	\$ 8,964	\$ 4,800	\$ 9,600	\$	9,282	\$ 18,564
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$	-	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.1p											
2.2	230kV										
2.2a	Circuit Breaker Foundations	1	EA		L,952	\$ 11,952			\$ 24,752	_	24,752
2.2b	Capacitor Bank Foundations	0	EA		1,820	\$ -	\$ 48,000		\$ 92,820	 	-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA		2,410	\$ 89,640		\$ 96,000	\$ 46,410		185,640
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA		2,410	\$ -	\$ 24,000	\$ -	\$ 46,410	 	-
2.2e	Switch Stand Foundations	8	EA		3,735	\$ 29,880	\$ 4,000	\$ 32,000	\$ 7,735	-	61,880
2.2f	Station Service Transformer Stand Foundation	0	EA		3,735	\$ -			\$ 7,735		-
2.2g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	•
2.2h	Bus Support 1 Ph Foundations	0	EA		3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	_	-
2.2j	Instrument Transformer Stand Foundations	9	EA		3,735	\$ 33,615		\$ 36,000	\$ 7,735		69,615
2.2k	Arrester Stand Foundations	3	EA		3,735	\$ 11,205	\$ 4,000	\$ 12,000	\$ 7,735	\$	23,205
2.2m	Wave Trap Stand Foundations	1	EA		3,735	\$ 3,735		\$ 4,000	\$ 7,735		7,735
2.2n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.2p										<u> </u>	
2.3	115kV										
2.3a	Circuit Breaker Foundations	0	EA		_	\$ -			\$ 10,829		-
2.3b	Capacitor Bank Foundations	0	EA		3,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$	-
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA		,434	\$ 65,736		\$ 70,400	\$ 34,034	\$	136,136
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 10	,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$	-
2.3e	Switch Stand Foundations	4	EA	\$	2,988	\$ 11,952	\$ 3,200	\$ 12,800	\$ 6,188	\$	24,752
2.3f	Fuse Stand Foundations	0	EA	\$	2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3g	Bus Support 3ph Foundations	0	EA	\$	2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3h	Bus Support 1 Ph Foundations	0	EA	\$	2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3j	Instrument Transformer Stand Foundations	6	EA	\$	2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$	37,128
2.3k	Arrester Stand Foundations	6	EA	\$	2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$	37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$:	,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$	-
2.3n	Station Service Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.3p	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.4	Transformer Foundations										
2.4a	345-230kV Transformer Foundation w/ Oil Containment	1	EA	\$ 9	7,110	\$ 97,110	\$ 104,000	\$ 104,000	\$ 201,110	\$	201,110
2.4b	345-115kV Transformer Foundation w/ Oil Containment	2	EA	\$ 74	1,700	\$ 149,400	\$ 80,000	\$ 160,000	\$ 154,700	\$	309,400
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.5	Control House Foundations / Pad										
2.5a	Control House / Pad	1	EA	\$ 9	7,110	\$ 97,110	\$ 104,000	\$ 104,000	\$ 201,110	\$	201,110
2.5b	Generator Foundation	1	EA	\$ 10	5,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$	33,000
										<u> </u>	
2.6	Lightning Mast Foundations										
2.6a	70' Lightning Mast Foundation	0	EA		,229				\$ 10,829		-
2.6b				\$	-	\$ -	\$ -	\$ -		\$	-
2.6c				\$	-	\$ -	\$ -	\$ -	\$ -	\$	
										<u> </u>	
TOTAL - SUBS	TATION FOUNDATIONS					\$ 2,443,003		\$ 2,616,200		\$	5,059,203
3. SUBSTATIO	N STRUCTURES										
3.1	345kV										
3.1a	Substation A-Frame Structures - Stand alone	8	EA	\$ 3	7,000	\$ 296,000	\$ 37,000	\$ 296,000	\$ 74,000	\$	592,000

Item	Item Description E	stimated Quantity	Unit of Measure	Mater	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$	37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$	-
3.1c	Switch Stands	17	EA	\$	14,800	\$ 251,600	\$ 14,800	\$ 251,600	\$ 29,600	\$	503,200
3.1d	Station Service Transformer Stand	1	EA	\$	14,800	\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$	29,600
3.1e	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
3.1f	Bus Support 1 Ph	42	EA	\$	3,700	\$ 155,400	\$ 3,700	\$ 155,400	\$ 7,400	\$	310,800
3.1g	Instrument Transformer Stand	33	EA	\$	1,850	\$ 61,050	\$ 1,850	\$ 61,050	\$ 3,700	\$	122,100
3.1h	Arrester Stand	6	EA	\$	1,850	\$ 11,100	\$ 1,850	\$ 11,100	\$ 3,700	\$	22,200
3.1j	Wave Trap Stand	2	EA	\$	7,400	\$ 14,800	\$ 7,400	\$ 14,800	\$ 14,800	\$	29,600
3.1k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.2	230kV										
3.2a	Substation A-Frame Structures - Stand alone	1	EA	\$	33,300	\$ 33,300	\$ 33,300	\$ 33,300	\$ 66,600	\$	66,600
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$	33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2c	Switch Stands	2	EA	\$	12,025	\$ 24,050	\$ 12,025	\$ 24,050	\$ 24,050	\$	48,100
3.2d	Station Service Transformer Stand	0	EA	\$	12,025	\$ -		\$ -	\$ 24,050	\$	-
3.2e	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
3.2f	Bus Support 1 Ph	0	EA	\$	2,775	\$ -	\$ 2,775	\$ -	\$ 5,550	\$	-
3.2g	Instrument Transformer Stand	9	EA	\$	1,295	\$ 11,655	\$ 1,295	\$ 11,655	\$ 2,590	\$	23,310
3.2h	Arrester Stand	3	EA	\$	1,295	\$ 3,885	\$ 1,295	\$ 3,885	\$ 2,590	\$	7,770
3.2j	Wave Trap Stand	1	EA	\$	5,550	\$ 5,550	\$ 5,550	\$ 5,550	\$ 11,100	\$	11,100
3.2k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.3	115kV										
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$	18,500	\$ 37,000	\$ 18,500	\$ 37,000	\$ 37,000	\$	74,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$	-
3.3c	Switch Stands	2	EA	\$	7,955	\$ 15,910	\$ 7,955	\$ 15,910	\$ 15,910	\$	31,820
3.3d	Fuse Stand	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$	-
3.3e	Bus Support 3ph	0	EA	\$	3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$	-
3.3f	Bus Support 1 Ph	0	EA	\$		\$ -	\$ 1,850	\$ -	\$ 3,700	\$	_
3.3g	Instrument Transformer Stand	6	EA	\$	740	\$ 4,440		\$ 4,440	\$ 1,480	\$	8,880
3.3h	Arrester Stand	6	EA	\$	740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$	8,880
3.3j	Wave Trap Stand	0	EA	\$	3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$	-
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
					,		,		,		
TOTAL - SUBST	TATION STRUCTURES					\$ 944,980		\$ 944,980		Ś	1,889,960
4. MAJOR EQU						, , , , ,		, ,,,,,			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
4.1	345kV										
4.1a	Circuit Breakers	8	EA	\$	200,000	\$ 1,600,000	\$ 80,000	\$ 640,000	\$ 280,000	\$	2,240,000
4.1b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.1c	345 kV - 230 kV Auto Transformer	1	EA	\$	3,400,000	\$ 3,400,000		\$ 750,000	\$ 4,150,000	<u> </u>	4,150,000
4.1d	345 kV - 115 kV Auto Transformer	2	EA	\$	3,400,000	\$ 6,800,000		\$ 1,500,000	\$ 4,150,000		8,300,000
4.2	230kV										
4.2a	Circuit Breakers	1	EA	\$	115,000	\$ 115,000	\$ 80,000	\$ 80,000	\$ 195,000	\$	195,000
4.2b	Capacitor Banks	0	EA	\$	-		\$ 80,000		\$ 80,000	i .	-
							,		,		
4.3	115kV										
4.3a	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$	-
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000		-
							·				
TOTAL - MAJO	R EQUIPTMENT					\$ 11,915,000		\$ 2,970,000		\$	14,885,000
	PTMENT / MATERIALS										,

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	2	EA	\$ 40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$ 110,000
5.1b	Disconnect Switches - 3ph w/ manual operator	17	EA	\$ 35,000	\$ 595,000	\$ 17,500	\$ 297,500	\$ 52,500	\$ 892,500
5.1c	VT'S	6	EA	\$ 25,000	\$ 150,000	\$ 12,000	\$ 72,000	\$ 37,000	\$ 222,000
5.1d	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.1e	CCVT'S	21	EA	\$ 13,000	\$ 273,000	\$ 8,000	\$ 168,000	\$ 21,000	\$ 441,000
5.1f	Arresters	15	EA	\$ 6,500	\$ 97,500	\$ 1,500	\$ 22,500	\$ 8,000	\$ 120,000
5.1g	Wave Traps	2	EA	\$ 13,000	\$ 26,000	\$ 8,000	\$ 16,000	\$ 21,000	\$ 42,000
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$ 250,000
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	1	EA	\$ 35,000	\$ 35,000	\$ 15,000	\$ 15,000	\$ 50,000	\$ 50,000
5.2b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 30,000	\$ 30,000	\$ 17,500	\$ 17,500	\$ 47,500	\$ 47,500
5.2c	VT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.2d	CT'S	3	EA	\$ 13,000	\$ 39,000		\$ 24,000	\$ 21,000	\$ 63,000
5.2e	CCVT'S	3	EA	\$ 10,000	\$ 30,000	\$ 6,000	\$ 18,000	\$ 16,000	\$ 48,000
5.2f	Arresters	6	EA	\$ 5,000	\$ 30,000	\$ 6,000	\$ 36,000	\$ 11,000	\$ 66,000
5.2g	Wave Traps	1	EA	\$ 13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	2	EA	\$ 33,000	\$ 66,000	\$ 15,000	\$ 30,000	\$ 48,000	\$ 96,000
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
5.3c	VT'S	6	EA	\$ 13,000	\$ 78,000		\$ 48,000	\$ 21,000	\$ 126,000
5.3d	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.3e	CCVT'S	2	EA	\$ 8,000	\$ 16,000	\$ 8,000	\$ 16,000	\$ 16,000	\$ 32,000
5.3f	Arresters	12	EA	\$ 3,420	\$ 41,040	\$ 6,000	\$ 72,000	\$ 9,420	\$ 113,040
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	L EQUIPTMENT / MATERIALS				\$ 1,994,540		\$ 1,060,500		\$ 3,055,040
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ 975,000	\$ 975,000	\$ 170,000	\$ 170,000	\$ 1,145,000	\$ 1,145,000
6.2	Protection and Telecom Equipment Panels	29	EA	\$ 35,000	\$ 1,015,000	\$ 10,000	\$ 290,000	\$ 45,000	\$ 1,305,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,000
6.4	Control Cables	1	LS	\$ 472,500	\$ 472,500	\$ 472,500	\$ 472,500	\$ 945,000	\$ 945,000
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,000
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
				,			,	,	-
	ROL HOUSE / PANELS / GENERATOR				\$ 2,927,500		\$ 1,477,500		\$ 4,405,000
7. MISC ITEMS									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Su	upply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	тота	AL
7.1	Conduit & Cable Trench System	1,950	LF	\$	185.00	\$ 360,750	\$ 170.00	\$ 331,500	\$ 355	\$	692,250
7.2	Rigid Bus, Fittings & Insulators	2,500	LF	\$	125.07	\$ 312,675	\$ 237.10	\$ 592,750	\$ 362	\$	905,425
7.3	Strain Bus, Connectors & Insulators	2,000	LF	\$	39.30	\$ 78,600	\$ 53.35	\$ 106,700	\$ 93	\$	185,300
	Grounding System	25,000	LF	\$	6.93	·		·	\$ 40		987,750
	Strain Bus Insulators - 345kV	48	EA	\$	2,000		\$ 1,050		\$ 3,050		146,400
	Strain Bus Insulators - 230kV	6	EA	\$	1,400		\$ 750		\$ 2,150	\$	12,900
$\overline{}$	Strain Bus Insulators - 115kV	12	EA	\$	1,000				\$ 1,550	\$	18,600
7.8	Low Voltage AC Station Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.9	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12											
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20											
7.21											
7.22											
7.23											
7.24											
7.25	TERAC					Ć 1.444.67E		ć 2.224.0F0		ć 2	772 625
						\$ 1,441,675		\$ 2,331,950			,773,625
	dam Substation - Install					\$ 24,563,589		\$ 18,454,385		\$ 43,	,017,974
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
$\overline{}$	Contractor Mobilization / Demobilization										
	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 430,180	\$ 430,180	\$ 430,180	\$	430,180
	Project Management, Material Handling & Amenities										
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 1,554,022	\$ 1,554,022	\$ 1,554,022	\$ 1,	,554,022
	Utility PM and Project Oversite	1	LS			\$ -	\$ 430,180		\$ 430,180		430,180
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 430,180	\$ 430,180	\$ 430,180	\$	430,180
	Engineering										
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 3,441,438	\$ 3,441,438	\$ 3,441,438	\$ 3,	,441,438
8.6	LiDAR		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 301,126	\$ 301,126	\$ 301,126	\$	301,126
	Testing & Commissioning										
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 1,075,449	\$ 1,075,449	\$ 1,075,449	\$ 1,	,075,449
$\overline{}$	Permitting and Additional Costs										
	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	Environmental Mitigation	-	LS	\$		\$ -		\$ -	\$ -	\$	
	Warranties / LOC's	1	LS	\$		\$ -	\$ 129,054		\$ 129,054		129,054
	Real Estate Costs (New)	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$	-
\vdash	Real Estate Costs (Incumbent Utility)	1	LS	\$		\$ -	\$ 247,500	· ·	•		247,500
0.14	near Estate costs (incumbent officy)	1	LJ	1,	-	-	247,300	247,300	247,300	Page 20	_

Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 1,	965,087	\$ 1,965,087	\$ -	\$ -	\$ 1,965,087	\$ 1,965,087
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 43,018	\$ 43,018	\$ 43,018	\$ 43,018
TOTAL - MOB,	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,965,087		\$ 8,096,146		\$ 10,061,233

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D. SS Rotterdam-Install

E. Rotterdam Substation - Removal

Estimate Revision: 5 Total: \$ 4,153,136

NAT & NYPA - T025 - (Segment A, + 765kV)									
	Supply	Installation	Total						
E. Rotterdam Substation - Removal									
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	\$ 1,472,750	\$ 1,472,750						
2. SUBSTATION FOUNDATIONS	\$ -	\$ 617,400	\$ 617,400						
3. SUBSTATION STRUCTURES	\$ -	\$ 534,900	\$ 534,900						
4. MAJOR EQUIPTMENT	\$ -	\$ 147,000	\$ 147,000						
5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$ 169,500	\$ 169,500						
6. CONTROL HOUSE / PANELS	\$ -	\$ 150,000	\$ 150,000						
7. MISC ITEMS	\$ -	\$ 519,480	\$ 519,480						
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -	\$ 542,106	\$ 542,106						
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -						
SUBTOTAL:	\$ -	\$ 4,153,136	\$ 4,153,136						
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -						
TOTAL:	\$ -	\$ 4,153,136	\$ 4,153,136						

ption	

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
E. Rotte	rdam Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	6.3	ACRES	\$ -	\$ -	\$ 203,000	\$ 1,268,750	\$ 203,000	\$ 1,268,750
1.2	Station stone within substation fence.	2,000	CY	\$ -	\$ -	\$ 102	\$ 204,000	\$ 102	\$ 204,000
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ 1,472,750		\$ 1,472,750
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
	-								Dogg 22 of 60

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2	230kV								
2.2a	Circuit Breaker Foundations	9	EA	\$ -	\$ -	\$ 7,200	\$ 64,800	\$ 7,200	\$ 64,800
2.2b	Capacitor Bank Foundations	2	EA	\$ -	\$ -	\$ 32,000	\$ 64,000	\$ 32,000	\$ 64,000
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	1	EA	\$ -	\$ -	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000
2.2d	Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	\$ 55,000
2.2e	Switch Stand Foundations	15	EA	\$ -	\$ -	\$ 5,200	\$ 78,000	\$ 5,200	\$ 78,000
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	59	EA	\$ -	\$ -	\$ 2,400	\$ 141,600	\$ 2,400	\$ 141,600
2.2j	Instrument Transformer Stand Foundations	15	EA	\$ -	\$ -	\$ 2,400	\$ 36,000	\$ 2,400	\$ 36,000
2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ -	\$ 2,400	\$ 14,400	\$ 2,400	\$ 14,400
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	3	EA	\$ -	\$ -	\$ 5,200	\$ 15,600	\$ 5,200	\$ 15,600
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	3	EA	\$ -	\$ -	\$ 42,000	\$ 126,000	\$ 42,000	\$ 126,000
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CURC	TATION FOUNDATIONS				\$ -		\$ 617,400		\$ 617,400
	ATION FOUNDATIONS N STRUCTURES				\$ -		\$ 617,400		\$ 617,400
3. SUBSTATIO	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
									\$ -
						•			\$ -
3.1b	Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ -		\$ -	\$ - \$ -	\$	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	1	EA	\$ -	\$ -	\$ 27,000	\$ 27,000	\$ 27,000	\$ 27,000
3.2b	Substation A-Frame Structures - Shared Column	5	EA	\$ -	\$ -	\$ 27,000	\$ 135,000	\$ 27,000	\$ 135,000
3.2c	Switch Stands	15	EA	\$ -	\$ -	\$ 9,750	\$ 146,250	\$ 9,750	\$ 146,250
3.2d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2e	Bus Support 3ph	4	EA	\$ -	\$ -	\$ 2,250	\$ 9,000	\$ 2,250	\$ 9,000
3.2f	Bus Support 1 Ph	59	EA	\$ -	\$ -	\$ 2,250	\$ 132,750	\$ 2,250	\$ 132,750
3.2g	Instrument Transformer Stand	15	EA	\$ -	\$ -	\$ 1,050	\$ 15,750	\$ 1,050	\$ 15,750
3.2h	Arrester Stand	6	EA	\$ -	\$ -	\$ 1,050	\$ 6,300	\$ 1,050	\$ 6,300
3.2j	Wave Trap Stand	3	EA	\$ -	\$ -	\$ 4,500	\$ 13,500	\$ 4,500	\$ 13,500
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ 30,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	3	EA	\$ -	\$ -	\$ 6,450	\$ 19,350	\$ 6,450	\$ 19,350
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				Ť	,	*	*	*	•
TOTAL - SUBS	TATION STRUCTURES				\$ -		\$ 534,900		\$ 534,900
4. MAJOR EQU					Ţ.		ÿ 33 1,300		33.,300
4.1	345kV								
4.2	230kV								
4.2a	Circuit Breakers	9	EA	\$ -	\$ -	\$ 7,000	\$ 63,000	\$ 7,000	\$ 63,000
4.2b	Capacitor Banks	2	EA	\$ -	\$ -	\$ 42,000	\$ 84,000	\$ 42,000	\$ 84,000
								•	·
4.3	115kV								
	R EQUIPTMENT				\$ -		\$ 147,000		\$ 147,000
	IPTMENT / MATERIALS						117,000		. 1.7,500
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0		\$ -		\$ 5,500		\$ 5,500	
5.1c	VT'S	0		\$ -	\$ -		\$ -		\$ -
5.1d	CT'S	0	EA	\$ -	+		\$ -		\$ -
5.1e	CCVT'S	0		\$ -	\$ -	\$ 2,500		\$ 2,500	
5.1f	Arresters	0		\$ -	\$ -	\$ 1,500		\$ 1,500	
	Wave Traps	0		\$ -	\$ -			\$ 2,500	
5.1g									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
5.2b	Disconnect Switches - 3ph w/ manual operator	12	EA	\$ -	\$ -		\$ 66,000	\$ 5,500	
5.2c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CCVT'S	8	EA		\$ -	\$ 1,500	\$ 12,000		
5.2e					<u>'</u>	, , , , , , , , , , , , , , , , , , , ,			
5.2f	Arresters	15	EA	\$ -	\$ -	\$ 2,500	\$ 37,500	\$ 2,500	
5.2g	Wave Traps	3	EA	\$ -	\$ -	\$ 2,500	\$ 7,500	\$ 2,500	
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -		\$ 16,500	\$ 5,500	\$ 16,500
5.3c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3e	CCVT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3f	Arresters	9	EA	\$ -	\$ -	\$ 1,500	\$ 13,500	\$ 1,500	\$ 13,500
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		0	EA		1		\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	· -	\$ -	-
	LL EQUIPTMENT / MATERIALS				\$ -		\$ 169,500		\$ 169,500
	HOUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ -	\$ -	,	\$ 150,000	\$ 150,000	
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TROL HOUSE / PANELS / GENERATOR				\$ -		\$ 150,000		\$ 150,000
7. MISC ITEMS	S								
7.1	Conduit & Cable Trench System	1	LS	\$ -	\$ -	\$ 42,000.00	\$ 42,000	\$ 42,000	\$ 42,000
7.2	Rigid Bus, Fittings & Insulators	3,200	LF	\$ -	\$ -	\$ 126.25	\$ 404,000	\$ 126	\$ 404,000
7.3	Strain Bus, Connectors & Insulators	800	LF	\$ -	\$ -	\$ 39.35	\$ 31,480	\$ 39	\$ 31,480
7.4	Grounding System	1	LS	\$ -	\$ -	\$ 42,000.00	\$ 42,000	\$ 42,000	\$ 42,000
7.5									
7.6									
7.7									
7.8									
	The state of the s	I .	l .	i .	I .	1	1		l

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	TITEMS				\$ -		\$ 519,480		\$ 519,480
	rdam Substation - Removal				\$ -		\$ 3,611,030		\$ 3,611,030
8. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 36,110	\$ 36,110	\$ 36,110	\$ 36,110
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 130,448	\$ 130,448	\$ 130,448	\$ 130,448
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 36,110	\$ 36,110	\$ 36,110	\$ 36,110
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 36,110	\$ 36,110	\$ 36,110	\$ 36,110
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 288,882	\$ 288,882	\$ 288,882	\$ 288,882
8.6	LiDAR	•	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	EA	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500	
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 25,277	\$ -	\$ 25,277	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 90,276	\$ -	\$ 90,276	\$ -
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 10,833	\$ 10,833	\$ 10,833	\$ 10,833
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17			LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 3,611	\$ 3,611	\$ 3,611	\$ 3,611
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 542,106		\$ 542,106

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E. SS Rotterdam-Removal

timate evision:	5		Total:	\$	2,607,956										
	NAT & NYPA - T025 - (Segn	nent A,	+ 765kV)												
			Supply		Installation		Total								
	F. Edic Substation - Install]							
	1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,025		5,625		7,650]							
	2. SUBSTATION FOUNDATIONS	\$	100,098		107,200		207,298	1							
	3. SUBSTATION STRUCTURES	\$	44,400	\$	44,400	\$	88,800								
	4. MAJOR EQUIPTMENT	\$	200,000	\$	80,000	\$	280,000								
	5. SMALL EQUIPTMENT / MATERIALS	\$	280,000	\$	133,500	\$	413,500								
	6. CONTROL HOUSE / PANELS	\$	173,850	\$	98,850	\$	272,700	1							
	7. MISC ITEMS	\$	339,357	\$	507,880	\$	847,237	1							
	8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	91,178	\$	399,592	\$	490,771	1							
	CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-	1							
	SUBTOTAL:	\$	1,230,908	\$	1,377,047	\$	2,607,956	1							
	CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-	1							
	TOTAL:	\$	1,230,908	\$	1,377,047	\$	2,607,956	İ							
cription	n of Work:														
Item	ltem Description		Estimated Quantity	U	nit of Measure	м	aterial Supply Rate	Materia	al Supply Cost	Labor & Equipment Supply Rate	Labor & Equipme Cost	nt	Total Unit Rate		TOTAL
Edic S	Substation - Install														
	/ GRADING/ FENCING / CIVIL														
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.		0		ACRES	\$	-	\$	-	\$ 203,000	\$.	- 1	\$ 203,000	\$	
1.2	Station stone within substation fence.		75		CY	\$	27	\$	2,025				\$ 102	\$	7
1.3	Substation Fence		0		LF	\$	100	\$	-	\$ 100		-	\$ 200	\$	
1.4	Permanent Access Road - 20'-Wide (From Gordon RD)		0		LF	\$	35	\$	-	\$ 285	\$ -		\$ 320	\$	
1.5															
1.6															
1.7															
1.8															
1.9															
1.10															
1.11															
1.12															
1.13															
1.14														<u> </u>	
1.15															
	PREP/ GRADING/ FENCING / CIVIL							\$	2,025		\$ 5,6	525		\$	7
UBSTATIC 2.1	DN FOUNDATIONS 345kV	+													
2.1a	Circuit Breaker Foundations		1		EA	Ś	14.940	Ġ	14.940	\$ 16.000	\$ 16,0	200	\$ 30.940	Ś	30
2.1b	Capacitor Bank Foundations Capacitor Bank Foundations	_	0	_	EA	\$	56,025		,	\$ 60,000	-7-	_	\$ 116,025	Ś	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	_	0		EA	\$	26,145			\$ 28,000	т	_	\$ 54,145	Ś	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	+	0	_	EA	\$	26,145			\$ 28,000		_	\$ 54,145	Ś	
2.1e	Switch Stand Foundations		6		EA	\$	4,482			\$ 4,800			\$ 9,282	Ś	55
2.1f	Station Service Transformer Stand Foundation	+	0		EA	Ś	4,482	-		\$ 4,800		-	\$ 9,282	Ś	
2.1g	Bus Support 3ph Foundations		0		EA	\$	- 1,102	\$		\$ -			\$ -	\$	
2.1h	Bus Support 1 Ph Foundations		0		EA	\$	4,482	-		\$ 4,800			\$ 9,282	\$	
2.1j	Instrument Transformer Stand Foundations		9		EA	\$	4,482		40,338	\$ 4,800	\$ 43,2		\$ 9,282	\$	83
2.1k	Arrester Stand Foundations		3		EA	\$	4,482			\$ 4,800	\$ 14,4		\$ 9,282	\$	27
2.1m	Wave Trap Stand Foundations		1		EA	\$	4,482	\$	4,482	\$ 4,800	\$ 4,8	300	\$ 9,282	\$	9
2.1n	Misc. Structure Foundations		0		EA	\$	-	\$	-	\$ -	\$.	- 1	\$ -	\$	
2.1p		+				1						+		_	
2.2	230kV														
2.2a	Circuit Breaker Foundations		0		EA	\$	11,952	\$	-	\$ 12,800		- !	\$ 24,752	\$	
2.2b	Capacitor Bank Foundations		0		EA	\$	44,820	\$	-	\$ 48,000	\$ -	- !	\$ 92,820	\$	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)		0		EA	\$	22,410			\$ 24,000			\$ 46,410	\$	
2.2d	Caisson DE Foundations (for DE A frame str shared column)		0		EA	\$	22,410		-	\$ 24,000		- !	\$ 46,410	\$	
2.2e	Switch Stand Foundations		0		EA	\$	3,735		-	\$ 4,000	\$ -	- :	\$ 7,735	\$	
2.2f	Station Service Transformer Stand Foundation		0		EA	\$	3,735			\$ 4,000			\$ 7,735	\$	
2 2 a	Bus Support 3nh Foundations	1	0	İ	EΛ	١ć		Ċ		¢ _	Ċ.	1 .	ا ۔ ا	ć	

0

EΑ

EA

\$

3,735 \$

4,000 \$

- \$

7,735 \$

- \$ - \$

2.2g

2.2h

Bus Support 3ph Foundations

Bus Support 1 Ph Foundations

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0		\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	+ · · · · · · · · · · · · · · · · · · ·	\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0		\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	•
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -		\$ -	\$ 154,700	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	2								
2.5	Control House Foundations / Pad			A 75.404		4 04.500		4 457.704	•
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b	60' Lightning Mast Foundation	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c	50' Lightning Mast Foundation	0	EA	\$ -	\$ -	s -	\$ -	\$ -	\$ -
- 2.00	SS Eightining Mascroanaation			<u> </u>	*	Ť	·	¥	*
TOTAL - SUBS	TATION FOUNDATIONS				\$ 100,098		\$ 107,200		\$ 207,298
	N STRUCTURES						,		
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0		\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	
3.1c	Switch Stands	1	EA	\$ 14,800	\$ 14,800		\$ 14,800	\$ 29,600	
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -		\$ -	\$ 29,600	
3.1e	Bus Support 3ph	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.1g	Instrument Transformer Stand	9	EA	\$ 1,850	\$ 16,650		\$ 16,650	\$ 3,700	\$ 33,300
3.1h	Arrester Stand	3	EA	\$ 1,850	\$ 5,550		\$ 5,550	\$ 3,700	
3.1j	Wave Trap Stand	1	EA	\$ 7,400	\$ 7,400	\$ 7,400	\$ 7,400	\$ 14,800	\$ 14,800
3.1k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -		\$ -	\$ 66,600	
3.2c	Switch Stands	0	EA	\$ 12,025	\$ -		\$ -	\$ 24,050	
3.2d	Station Service Transformer Stand	0		\$ 12,025				\$ 24,050	
3.2e	Bus Support 3ph	0		\$ -			\$ -		\$ -
3.2f	Bus Support 1 Ph	0		\$ 2,775				\$ 5,550	
3.2g	Instrument Transformer Stand	0		\$ 1,295				\$ 2,590	
3.2h	Arrester Stand	0		\$ 1,295				\$ 2,590	
3.2j 3.2k	Wave Trap Stand Misc. Structures	0		\$ 5,550 \$ 6,475		\$ 5,550 \$ 6,475		\$ 11,100 \$ 12,950	
3.2K	IVIIDO. DEI UCEULES	1	EA CA	0,4/5	-	9 0,4/5	- ب	ب 12,950	-
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
	1			1. 20,500	1.	1. 20,500		. 3.,300	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18	,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7	,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7	,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA		,330		\$ 3,330		\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA		,850		\$ 1,850		\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$		\$ -	7	\$ -		\$ -
3.3h	Arrester Stand	0	EA	\$	740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA		,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6	,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TATION STRUCTURES					\$ 44,400		\$ 44,400		\$ 88,800
4. MAJOR EQU										
4.1	345kV									
4.1a	Circuit Breakers	1			,000		\$ 80,000	\$ 80,000	\$ 280,000	
4.1b	Capacitor Banks	0	EA	\$		\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$	_	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV									
4.2a	Circuit Breakers	0	EA		,000		\$ 80,000	\$ -	\$ 195,000	
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV									
4.3a	Circuit Breakers	0	EA		,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
	- FALLETA AFAIR									
	R EQUIPTMENT					\$ 200,000		\$ 80,000		\$ 280,000
	IPTMENT / MATERIALS									
5.1	345kV									
5.1a	Line Switches - 3ph w/ motor operator	1			,000		\$ 15,000			\$ 55,000
5.1b	Disconnect Switches - 3ph w/ manual operator	1	EA		,000		\$ 17,500	\$ 17,500		\$ 52,500
5.1c	VT'S	3	EA		,000	\$ 75,000	\$ 12,000	\$ 36,000	\$ 37,000	\$ 111,000
5.1d	CT'S	3	EA	-	,000		\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1e	CCVT'S	3	EA		,000		\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1f	Arresters	6			,500	\$ 39,000	\$ 1,500	\$ 9,000	\$ 8,000 \$ 21.000	\$ 48,000
5.1g	Wave Traps	1 0	EA EA		,000	+,	\$ 8,000 \$ 50,000	\$ 8,000	7,	\$ 21,000
5.1h 5.1j	Station Service Transformers	U	EA	\$ 200	,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1)										
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35	,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA		,000		\$ 17,500	7	\$ 47,500	
5.2c	VT'S	0	EA		,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA		,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA		,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA		,000		\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA		,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j	Station Service Hallstormers	-	27,	1		y	<u> </u>	· ·	,	*
3.2										
5.3	115kV									
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33	,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA		,000		\$ 17,500	\$ -		\$ -
5.3c	VT'S	0			,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.3d	CT'S	0	EA		,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.3e	CCVT'S	0	EA		,000	T	\$ 8,000	\$ -		\$ -
5.3f	Arresters	0	EA		,420		\$ 6,000	\$ -	1 -,	\$ -
5.3g	Wave Traps	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	Ś	_	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$ -
,				İ.	\neg					•
TOTAL - SMALL	L EQUIPTMENT / MATERIALS					\$ 280,000		\$ 133,500		\$ 413,500
										,500
	OUSE / PANELS / GENERATOR									

		Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3 125VDC	ection and Telecom Equipment Panels	3	EA	\$ 35,000	\$ 105,000	\$ 10,000	\$ 30,000	\$ 45,000	\$ 135,000
	DC Batteries	0	EA	\$ 75,000	\$ -	,		\$ 100,000	
	rol Cables	1	LS	\$ 68,850	\$ 68,850		\$ 68,850	\$ 137,700	\$ 137,700
	A and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Voltage AC Distribution istribution System	0	EA EA	\$ 50,000 \$ 50,000	\$ -	\$ 100,000 \$ 100,000	\$ - \$ -	\$ 150,000 \$ 150,000	\$ - \$ -
6.8 Security		0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	
6.9 Fire Ala		0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	
6.10 Genera		0	EA	\$ 100,000	\$ -	\$ 80,000		\$ 180,000	
							·	,	
TOTAL - CONTROL HOL	OUSE / PANELS / GENERATOR				\$ 173,850		\$ 98,850		\$ 272,700
7. MISC ITEMS									
7.1 Conduit	uit & Cable Trench System	800	LF	\$ 185.00	\$ 148,000	\$ 170.00	\$ 136,000	\$ 355	\$ 284,000
7.2 Rigid Bu	Bus, Fittings & Insulators	0	L.S.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	n Bus, Connectors & Insulators	2,500	LF	\$ 39.30	\$ 98,250		·	\$ 93	
	nding System	1	L.S.	\$ 10,395.00	\$ 10,395		\$ 73,305	\$ 83,700	
	n Bus Insulators - 345kV	24	EA EA	\$ 2,000 \$ 1,400	\$ 48,000 \$ -	\$ 1,050 \$ 750	\$ 25,200 \$ -	\$ 3,050 \$ 2,150	
	n Bus Insulators - 230kV n Bus Insulators - 115kV	0	EA EA	\$ 1,400		\$ 750		\$ 2,150	
	Voltage AC Station Service	0	LS	\$ 50,000	\$ -		\$ -	\$ 125,000	
7.9 SSVT Se		0	LS	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	
	rol Conduits from Trench to Equipment	1	LS	\$ 14,000	\$ 14,000			\$ 84,000	
	Materials (Above and Below Ground)	1	LS	\$ 20,712	\$ 20,712		\$ 70,000	\$ 90,712	
7.12									
7.13									
7.14									
7.15									
7.16 7.17									
7.17									
7.19									
7.20									
7.21									
7.22									
7.23									
7.24									
7.25 TOTAL - MISC ITEMS					ć 220.257		\$ 507.880		ć 047.227
					\$ 339,357		,,		\$ 847,237
F. Edic Substa	tation - Install				\$ 1,139,730		\$ 977,455		\$ 2,117,185
	GINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	ractor Mobilization / Demobilization		10		<u> </u>	A 24.4==	A 24	¢ 24.4==	A
	/ Demob cct Management, Material Handling & Amenities	1	LS	\$ -	\$ -	\$ 21,172	\$ 21,172	\$ 21,172	\$ 21,172
8 2 Project	ct Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ 76,483	\$ 76,483	\$ 76,483	\$ 76,483
and Cos	Cost Manager, SHEQ Staff, and Admin Staff)	-							
	y PM and Project Oversite	1	LS		\$ -	\$ 21,172	\$ 21,172	\$ 21,172	
	Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 21,172	\$ 21,172	\$ 21,172	\$ 21,172
Enginee	•								
	n Engineering	1		\$ -	\$ -				
8.6 LiDAR 8.7 Geotec		- 4	LS EA	\$ -	\$ -		\$ - \$ 14,000		\$ - \$ 14,000
	ecn eying/Staking	1	Site	\$ -		\$ 3,500			
	ng & Commissioning	1	JILE	-	-	7 14,820	7 14,020	7 14,020	7 14,020
	ng & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 52,930	\$ 52,930	\$ 52,930	\$ 52,930
	itting and Additional Costs		-			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. ,	. ,	,,,,,,
	onmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	onmental Mitigation	-	LS	\$ -			\$ -		\$ -
8.12 Warran	anties / LOC's	1	LS	\$ -	\$ -	\$ 6,352	\$ 6,352	\$ 6,352	\$ 6,352

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	ı	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.13	Real Estate Costs (New)	-	LS	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 91	L,178	\$ 91,178	\$ -	\$	-	\$ 91,178	\$ 91,178
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 2,11	7 \$	2,117	\$ 2,117	\$ 2,117
TOTAL - MOB,	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 91,178		\$	399,592		\$ 490,771

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G. Edic Substation - Removal

Estimate Revision: 5 Total: \$ 41,311

NAT & NYPA - T025 - (Segme	nt A, + 765kV)			
	Supply		Installation	Total
G. Edic Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ 14,200	\$ 14,200
3. SUBSTATION STRUCTURES	\$	-	\$ 6,750	\$ 6,750
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 4,500	\$ 4,500
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$ -
7. MISC ITEMS	\$	-	\$ 10,500	\$ 10,500
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 5,361	\$ 5,361
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	-	\$ 41,311	\$ 41,311
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	-	\$ 41,311	\$ 41,311

escrip	tion of	Work:
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
G. Edic S	ubstation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000		\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATION	FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 14,200	\$ 14,200	\$ 14,200	\$ 14,200
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
·									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -		\$ -	\$ 22,000	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -		\$ -	\$ 11,000	
	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200		\$ 5,200	
-	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -		\$ -		\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ -	_	\$ 2,400		\$ 2,400	
	1 complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete complete c			1 .			•		Page 22 of 60

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3	115kV	-							
2.3a	Circuit Breaker Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c 2.3d	Caisson DE Foundations (for DE A frame str stand alone)	0	EA EA	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.3u 2.3e	Caisson DE Foundations (for DE A frame str shared column) Switch Stand Foundations	0		\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	
2.3e 2.3f	Fuse Stand Foundations	0	EA EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations						·		
2.6a	70' Lightning Mast Foundation	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CURS	TATION FOLINDATIONS				\$ -		\$ 14,200		\$ 14,200
	ATION FOUNDATIONS N STRUCTURES				\$ -		\$ 14,200		\$ 14,200
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	3	EA	\$ -	\$ -	\$ 2,250	\$ 6,750		\$ 6,750
3.1g	Instrument Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	
3.2c	Switch Stands	0	EA	\$ -	\$ -	\$ 9,750		\$ 9,750	
	Station Service Transformer Stand	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 3ph	0		\$ -			\$ -		\$ -
	Bus Support 1 Ph	0		\$ -	\$ -			\$ 2,250	
3.2g	Instrument Transformer Stand	0		\$ -		\$ 1,050		\$ 1,050	
3.2h	Arrester Stand	0		\$ -		\$ 1,050		\$ 1,050	
3.2j	Wave Trap Stand	0		\$ -	\$ -			\$ 4,500	
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	14Flav								
	115kV Substation A Frame Structures Stand alone		Ε^	\$ -	ė	ć 1F.000	ė	ć 1F.000	\$ -
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	D22-f(0

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION STRUCTURES				\$ -		\$ 6,750		\$ 6,750
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0		\$ -	\$ -		\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	R EQUIPTMENT				\$ -		\$ -		\$ -
	PTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.1b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -		\$ -	\$ 5,500	
5.1c	VT'S	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -		\$ -		\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -		\$ -	\$ 2,500	
5.1f	Arresters	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2	230kV				<u> </u>	4 5 500	<u> </u>	A 5.500	•
5.2a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -		\$ -	\$ 5,500	
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	\$ -
5.2c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	0		\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.2f	Arresters	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.2g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
F 2	115kV								
5.3			F.*	ć	ć	ć	ć	ċ	ć
5.3a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ - \$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA FA	\$ -	т	\$ 5,500	\$ -	\$ 5,500	\$ -
5.3c 5.3d	VT'S CT'S	0	EA EA	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
-									
	CCVT'S Arrectore	0		\$ -	\$ -			\$ - \$ 1,500	
	Arresters Wave Traps	0		\$ -	\$ -		\$ -	\$ 1,500	
	Station Service Transformers	0		\$ -	\$ -				\$ -
	Fuses	0		\$ -			\$ - \$ -		\$ -
5.3j	1 4353	U	EA	-	-		· -	- ب	-
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
	OUSE / PANELS / GENERATOR				-		4,300		4,300
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
	Protection and Telecom Equipment Panels	0		\$ -	\$ -			\$ -	
		0		1.*	1.*	T	-	-	D 24 -f (0

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	125VDC Batteries	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS									
	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	
	Rigid Bus, Fittings & Insulators	1	LS	\$ -	\$ -	\$ 10,500.00	\$ 10,500	\$ 10,500	
	Strain Bus, Connectors & Insulators	0	EA	\$ -	\$ -		\$ -	\$ 39	
	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC I	TEMS				\$ -		\$ 10,500		\$ 10,500
G. Edic Si	ubstation - Removal				s -		\$ 35,950		\$ 35,950
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 360	\$ 360	\$ 360	\$ 360
	Project Management, Material Handling & Amenities	1.0	LJ	, -	, -	\$ 500	3 300	\$ 300	3 300
2.7	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 1,299	\$ 1,299	\$ 1,299	\$ 1,299
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 360	\$ 360	\$ 360	\$ 360
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 360		\$ 360	
-	Engineering		-						
	Design Engineering	1	LS	\$ -	\$ -	\$ 2,876	\$ 2,876	\$ 2,876	\$ 2,876
	LiDAR		Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 252	\$ -	\$ 252	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 899	\$ -	\$ 899	\$ -
	Permitting and Additional Costs								
	Environmental Licensing & Permitting Costs		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -		\$ 108	\$ 108	\$ 108
	Real Estate Costs (New)		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17			LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits		LS	İ.	\$ -	\$ 36	'	\$ 36	
	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -	. 30	\$ 5,361	. 30	\$ 5,361
	, , , , , , , , , , , , , , , , , , , ,						, ,,,,,,,,		

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G. SS Edic-Removal

H. Princetown Switchyard - Install

Estimate Revision: 5 Total: \$ 15,771,722

NAT & NYPA - T025 - (Segme	nt A,	+ 765kV)		
		Supply	Installation	Total
H. Princetown Switchyard - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	163,560	\$ 904,700	\$ 1,068,260
2. SUBSTATION FOUNDATIONS	\$	1,193,706	\$ 1,213,490	\$ 2,407,196
3. SUBSTATION STRUCTURES	\$	582,750	\$ 582,750	\$ 1,165,500
4. MAJOR EQUIPTMENT	\$	800,000	\$ 320,000	\$ 1,120,000
5. SMALL EQUIPTMENT / MATERIALS	\$	1,382,000	\$ 636,000	\$ 2,018,000
6. CONTROL HOUSE / PANELS	\$	1,621,800	\$ 1,043,550	\$ 2,665,350
7. MISC ITEMS	\$	895,854	\$ 1,373,004	\$ 2,268,858
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	531,174	\$ 2,527,384	\$ 3,058,558
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	7,170,844	\$ 8,600,878	\$ 15,771,722
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	7,170,844	\$ 8,600,878	15,771,722

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
H. Prince	etown Switchyard - Install								
	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	3.1	ACRES	\$ -	\$ -	\$ 203,000	\$ 629,300	\$ 203,000	\$ 629,300
1.2	Station stone within substation fence.	1,080	CY	\$ 2				\$ 102	
1.3	Substation Fence	1,260	LF	\$ 10) \$ 126,000	\$ 100	\$ 126,000	\$ 200	\$ 252,000
1.4	Permanent Access Road - 20'-Wide (Extend Existing)	240	LF	\$ 3	\$ 8,400	\$ 285	\$ 68,400	\$ 320	\$ 76,800
1.5									
1.6									
1.7									
1.8									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ 163,560		\$ 904,700		\$ 1,068,260
	NFOUNDATIONS								
	765kV								
	Circuit Breaker Foundations		EA.	\$ 22,41		\$ 24,000		\$ 46,410	
	Capacitor Bank Foundations		EA	\$ 56,02		\$ 60,000	\$ -	\$ 116,025	
	Caisson DE Foundations (for DE A frame str stand alone) Caisson DE Foundations (for DE A frame str shared column)		EA. EA.	\$ 52,29 \$ 52,29		\$ 56,000 \$ 56,000	\$ - \$ -	\$ 108,290 \$ 108,290	
	Switch Stand Foundations (for DE A frame Str Shared column)		EA.	\$ 52,29	<u> </u>	\$ 8,964	\$ -	\$ 108,290	
	Station Service Transformer Stand Foundation	0	EA.	\$ 4,48		\$ 4,800	\$ -	\$ 9,282	
	Bus Support 1ph Foundations (High Bus)		EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations (Low Bus)		EA.	\$ 8,96	1 \$ -	\$ 8,964	\$ -	\$ 17,928	
	Instrument Transformer Stand Foundations		EA.	\$ 8,96	\$ -	\$ 8,964	\$ -	\$ 17,928	\$ -
2.1k	Arrester Stand Foundations		EA.	\$ 8,96		\$ 8,964	\$ -	\$ 17,928	\$ -
2.1m	Wave Trap Stand Foundations		EA.	\$ 8,96	\$ -	\$ 8,964	\$ -	\$ 17,928	\$ -
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	345kV								
	Circuit Breaker Foundations	4	EA.	\$ 14,94	59,760	\$ 14,940	\$ 59,760	\$ 29,880	\$ 119,520
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,82		\$ 48,000	\$ -	\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	16	EA.	\$ 26,14	<u> </u>		\$ 418,320	\$ 52,290	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA.	\$ 26,14		\$ 26,145		\$ 52,290	
2.2e	Switch Stand Foundations	48	EA.	\$ 4,48	<u> </u>		\$ 215,136	\$ 8,964	\$ 430,272
2.2f	Station Service Transformer Stand Foundation	6	EA.	\$ 4,48	2 \$ 26,892	\$ 4,482	\$ 26,892	\$ 8,964	\$ 53,784

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Bus Support 1ph Foundations (High Bus)	0	EA.	\$ -	\$ -		\$ -		\$ -
	Bus Support 1 Ph Foundations (Low Bus)	39	EA.	\$ 4,482	, , , , , ,		\$ 174,798		\$ 349,596
	Instrument Transformer Stand Foundations	36	EA.	\$ 4,482	\$ 161,352			\$ 8,964	
	Arrester Stand Foundations	12	EA.	\$ 4,482	\$ 53,784			\$ 8,964	\$ 107,568
	Wave Trap Stand Foundations	4	EA.	\$ 4,482	\$ 17,928				\$ 35,856
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434			·	\$ 34,034	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434				\$ 34,034	
	Switch Stand Foundations	0	EA	\$ 2,988			\$ -	\$ 6,188	
	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	765-345kV Transformer Foundation w/ Oil Containment		EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	765-345kV Transformer Fire Wall		EA.	\$ 106,074	\$ -	\$ 113,600	\$ -	\$ 219,674	\$ -
2.4c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad / Generator / Station Service Distribution Line								
	Control House / Pad - 25' x 50'	1	EA	\$ 17,928	\$ 17,928			\$ 37,128	
	Generator Foundation	1	EA	\$ 16,434	\$ 16,434			\$ 34,034	\$ 34,034
	Station Service Distribution Line - 3ph.	1	LS	\$ -	\$ -	\$ 15,120	\$ 15,120	\$ 15,120	\$ 15,120
	Lightning Mast Foundations								
	70' Lightning Mast Foundation	6	EA	\$ 5,229	\$ 31,374			\$ 10,829	\$ 64,974
2.6b 2.6c				\$ - \$ -	\$ - \$ -		\$ - \$ -	\$ - \$ -	\$ - \$ -
2.60				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CLIDST	L TATION FOUNDATIONS				\$ 1,193,706		\$ 1,213,490		\$ 2,407,196
	N STRUCTURES				\$ 1,155,700		3 1,213,430		\$ 2,407,130
	765kV								
	Substation A-Frame Structures - Stand alone		EA.	\$ 111,000	\$ -	\$ 111,000	\$ -	\$ 222,000	\$ -
	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	1	EA.	. ,	•		\$ -	\$ 222,000	
				5 111.000	\$ -	S 111.000 I			
	Switch Stands		EA.	\$ 111,000 \$ 22,200	\$ - \$ -		\$ -		\$ -
3.1c	Switch Stands Station Service Transformer Stand				\$ -	\$ 22,200			
3.1c 3.1d	Station Service Transformer Stand		EA.	\$ 22,200	\$ - \$ -	\$ 22,200 \$ -	\$ - \$ -	\$ 44,400	\$ - \$ -
3.1c 3.1d 3.1e			EA. EA.	\$ 22,200 \$ -	\$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400	\$ - \$ - \$ -	\$ 44,400 \$ -	\$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f	Station Service Transformer Stand Bus Support 1ph (High Bus)		EA. EA. EA.	\$ 22,200 \$ - \$ 7,400	\$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400	\$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800	\$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus)		EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550	\$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700	\$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100	\$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand		EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250	\$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250	\$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500	\$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand		EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400	\$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast		EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV		EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone	4	EA. EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 74,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (Iow Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA. EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 24,000 \$ 74,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (Iow Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 8	EA. EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 37,000 \$ 37,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 74,000 \$ 74,000 \$ 74,000 \$ 29,600	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 8 1	EA. EA. EA. EA. EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 29,600 \$ 29,600	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 8 1 0	EA. EA. EA. EA. EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 29,600 \$ 29,600 \$ 29,600 \$ 11,100	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2d 3.2e 3.2f	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 34SkV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 8 1 0 39	EA. EA. EA. EA. EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 9,250 \$ 14,800 \$ 14,800 \$ 14,800 \$ 5,550 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 29,600 \$ 29,600 \$ 29,600 \$ 11,100 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2c 3.2d 3.2e 3.2f 3.2g	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 1 Ph Instrument Transformer Stand	0 8 1 0 39 36	EA. EA. EA. EA. EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ 14,800 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 14,800 \$ 14,800 \$ 14,800 \$ 14,800 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 29,600 \$ 29,600 \$ 29,600 \$ 11,100 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e 3.2f 3.2g 3.2h	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 34SkV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 8 1 0 39	EA. EA. EA. EA. EA. EA. EA. EA. EA. EA.	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550 \$ 3,700 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 22,200 \$ - \$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,8	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 44,400 \$ - \$ 14,800 \$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 29,600 \$ 29,600 \$ 29,600 \$ 11,100 \$ 7,400 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500		\$ 18,500	\$ -	\$ 37,000	
	Switch Stands	0	EA	\$ 7,95		\$ 7,955	\$ -	\$ 15,910	
	Fuse Stand	0	EA	\$ 7,95		\$ 7,955	\$ -	\$ 15,910	
	Bus Support 3ph	0	EA	\$ 3,330		\$ 3,330		\$ 6,660	
	Bus Support 1 Ph	0	EA	\$ 1,850		\$ 1,850	\$ -	\$ 3,700	
	Instrument Transformer Stand	0	EA	\$ 740		\$ 740	\$ -	\$ 1,480	
	Arrester Stand	0	EA	\$ 740		\$ 740	\$ -	\$ 1,480	
	Wave Trap Stand	0	EA	\$ 3,700		\$ 3,700	\$ -	\$ 7,400	
	Misc. Structures	0	EA	\$ 6,475		\$ 6,475	'	\$ 12,950	
3.5K	ivise. Structures	•	LA.	5 0,47.	1	5 0,475	,	7 12,550	1
TOTAL - SUBST	ATION STRUCTURES				\$ 582,750		\$ 582,750		\$ 1,165,500
4. MAJOR EQUI					3 382,730		382,730		3 1,103,300
	345kV								
		4	EA	\$ 200,000	\$ 800,000	\$ 80,000	\$ 320,000	\$ 280,000	\$ 1,120,000
	Circuit Breakers	4		· · · · · · · · · · · · · · · · · · ·	\$ 800,000				
4.2b	Capacitor Banks		EA	\$ -	· -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.5	44Flar								
	115kV		F.*	6 50.55		A		A 442.555	
	Circuit Breakers	0	EA	\$ 52,000		\$ 60,000	\$ -	\$ 112,000	
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
	REQUIPTMENT				\$ 800,000		\$ 320,000		\$ 1,120,000
	PTMENT / MATERIALS								
	345kV								
5.2a	Line Switches - 3ph w/ motor operator	4	EA	\$ 40,000		\$ 15,000	\$ 60,000	\$ 55,000	
	Disconnect Switches - 3ph w/ manual operator	8	EA	\$ 35,000	\$ 280,000	\$ 17,500	\$ 140,000	\$ 52,500	
5.2c	VT'S	12	EA	\$ 25,000	\$ 300,000	\$ 12,000	\$ 144,000	\$ 37,000	\$ 444,000
5.2d	CT'S	12	EA	\$ 13,000	\$ 156,000	\$ 8,000	\$ 96,000	\$ 21,000	\$ 252,000
5.2e	CCVT'S	12	EA	\$ 13,000	\$ 156,000	\$ 8,000	\$ 96,000	\$ 21,000	\$ 252,000
5.2f	Arresters	12	EA	\$ 6,500	\$ 78,000	\$ 1,500	\$ 18,000	\$ 8,000	\$ 96,000
5.2g	Wave Traps	4	EA	\$ 13,000	\$ 52,000	\$ 8,000	\$ 32,000	\$ 21,000	\$ 84,000
5.2h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$ 250,000
5.2j									
	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	- \$	\$ 15,000	\$ -	\$ 48,000	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000		\$ 17,500	\$ -	\$ 45,500	
	VT'S	0	EA	\$ 13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
	CT'S	0	EA	\$ 13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.3e	CCVT'S	0	EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$ -
5.3f	Arresters	0	EA	\$ 3,420	\$ -	\$ 6,000	\$ -	\$ 9,420	\$ -
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMALL	EQUIPTMENT / MATERIALS				\$ 1,382,000		\$ 636,000		\$ 2,018,000
6. CONTROL HO	DUSE / PANELS / GENERATOR								
	CONTROL HOUSE	1	EA	\$ 245,750	\$ 245,750	\$ 37,500	\$ 37,500	\$ 283,250	\$ 283,250
6.2	Protection and Telecom Equipment Panels	18	EA	\$ 35,000	\$ 630,000	\$ 10,000	\$ 180,000	\$ 45,000	\$ 810,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,000
	Control Cables	1		\$ 281,050					
	SCADA and Communications	0		\$ 281,030		\$ 281,030	· · · · · · · · · · · · · · · · · · ·	\$ 362,100	
		2		\$ 35,000					
	Low Voltage AC Distribution								
	DC Distribution System	2		\$ 50,000					
	Security Fin Alama	1	EA	\$ 7,500					
	Fire Alarm	1		\$ 7,500					
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
	AND HOUSE I DANIELS I OFFICE ATOM								
	ROL HOUSE / PANELS / GENERATOR				\$ 1,621,800		\$ 1,043,550		\$ 2,665,350
7. MISC ITEMS	345kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material !	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	1	TOTAL
7.15	Conduit & Cable Trench System	1,200	LF	\$	125.07	\$ 150,084	\$ 170.00	\$ 204,000	\$ 295	\$	354,084
7.16	Rigid Bus, Fittings & Insulators	1,000	LF	\$	125.07	\$ 125,070	\$ 237.10	\$ 237,100	\$ 362	\$	362,170
7.17	Strain Bus, Connectors & Insulators	1,600	LF	\$	61.50	\$ 98,400	\$ 78.69	\$ 125,904	\$ 140	\$	224,304
7.18	Grounding System	10,000	LF	\$	6.93	\$ 69,300	\$ 32.58	\$ 325,800	\$ 40	\$	395,100
7.19	Strain Bus Insulators - 345kV	24	EA	\$	2,000	\$ 48,000	\$ 1,050	\$ 25,200	\$ 3,050	\$	73,200
7.20	Low Voltage AC Station Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.21	SSVT Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.22	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.23	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.24											
7.25											
7.26											
7.27											
7.28											
7.29											
TOTAL - MISC	TITEMS					\$ 895,854		\$ 1,373,004		\$	2,268,858
	etown Switchyard - Install					\$ 6,639,670		\$ 6,073,494		\$	12,713,164
8. MOB/DEMO	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 127,132	\$ 127,132	\$ 127,132	\$	127,132
	Project Management, Material Handling & Amenities										
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 459,262	\$ 459,262	\$ 459,262	\$	459,262
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 127,132	\$ 127,132	\$ 127,132	\$	127,132
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 127,132	\$ 127,132	\$ 127,132	\$	127,132
	Engineering										
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 1,017,053	\$ 1,017,053	\$ 1,017,053	\$	1,017,053
8.6	LiDAR	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 88,992	\$ 88,992	\$ 88,992	\$	88,992
	Testing & Commissioning										
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 317,829	\$ 317,829	\$ 317,829	\$	317,829
	Permitting and Additional Costs										
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 38,139	\$ 38,139	\$ 38,139	\$	38,139
8.13	Real Estate Costs (New)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ 198,000	\$ 198,000	\$ 198,000	\$	198,000
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$	531,174	\$ 531,174	\$ -	\$ -	\$ 531,174	\$	531,174
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 12,713	\$ 12,713	\$ 12,713	\$	12,713
	/DEMOB. ENGINEERING. PERMITTING. T&C. PM & INDIRECTS:					\$ 531.174		\$ 2,527,384		Ś	3,058,558

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H. SS Princetown-Install

16,209 \$

86,210

70,001 \$

86,210

NAT & NYPA - T025 - (Segment A, + 765kV) Installation Total J. Porter Substation - Install 1. SITE PREP/ GRADING/ FENCING / CIVIL 2. SUBSTATION FOUNDATIONS \$ \$ - \$ 3. SUBSTATION STRUCTURES \$ \$ - \$ - \$ 4. MAJOR EQUIPTMENT \$ \$ 5. SMALL EQUIPTMENT / MATERIALS \$ \$ 6. CONTROL HOUSE / PANELS \$ \$ 7. MISC ITEMS 15,008 \$ 71,912 \$ 56,904 \$ 8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: \$ 1,201 \$ 13,097 \$ 14,298 CONTRACTOR MARK-UP (OH&P) SUBTOTAL: 16,209 \$ 70,001 \$ 86,210 CONTINGENCY ON ENTIRE PROJECT \$

Description of	W	or/	k:
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Estimate

Revision:

5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Porter	Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
1.3	Substation Fence	0	LF	\$ 100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4									
1.5									
1.6									İ
1.7									
1.8									İ
1.9									
1.10									
1.11									
1.12									İ
1.13									
1.14									İ
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS								
	345kV								
	Circuit Breaker Foundations	0	EA	\$ 14,940	\$ -	\$ 16,000		\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025	\$ -	,		\$ 116,025	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145	\$ -	7,		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145	\$ -	\$ 28,000		\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800		\$ 9,282	
	Station Service Transformer Stand Foundation	0		\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800		\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800		\$ 9,282	
	Arrester Stand Foundations	0	EA	\$ 4,482	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 9,282	
	Wave Trap Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	, , , , , , , , , , , , , , , , , , , ,		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -			\$ 92,820	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	, , , , , , , , , , , , , , , , , , , ,		\$ 46,410	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000		\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000		\$ 7,735	
	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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J. Porter Substation - Install

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -		\$ -	\$ 69,615	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -		\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
	·								•
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION FOUNDATIONS				\$ -		\$ -		\$ -
3. SUBSTATION 3.1	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -		\$ -	\$ 74,000	
	Switch Stands	0	EA	\$ 14,800	\$ -		\$ -	\$ 29,600	
	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -		\$ -	\$ 29,600	
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.1g	Instrument Transformer Stand	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
3.1h	Arrester Stand	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
	Wave Trap Stand	0	EA	\$ 7,400	\$ -	\$ 7,400	\$ -	\$ 14,800	•
3.1k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
2.2	22014/								
3.2a	230kV Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
	Substation A-Frame Structures - Stand alone	0	EA	. ,	\$ -		\$ -	\$ 66,600	
	Switch Stands	0		\$ 12,025					
	Station Service Transformer Stand	0	EA	\$ 12,025		\$ 12,025		\$ 24,050	
	Bus Support 3ph	0	EA	\$ -	\$ -			\$ -	
	Bus Support 1 Ph	0	EA		\$ -			\$ 5,550	
	Instrument Transformer Stand	0	EA			\$ 1,295		\$ 2,590	
	Arrester Stand	0	EA	\$ 1,295	\$ -			\$ 2,590	\$ -
	Wave Trap Stand	0	EA	,	\$ -	\$ 5,550		\$ 11,100	
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -		\$ -	\$ 6,660	
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3h	Arrester Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	•
4.1b	Capacitor Banks	0		\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV		F.*	\$ -	\$ -	\$ 80,000	Ś -	ć 00.000	\$ -
4.2a	Circuit Breakers	0		· .	:			\$ 80,000	•
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
		0	EA EA		т	,			\$ - \$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAIC	 R EQUIPTMENT				\$ -		\$ -		\$ -
	IPTMENT / MATERIALS				\$ -		\$ -		\$ -
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,000	\$ -	\$ 15,000	\$ -	\$ 55,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	
5.1c	VT'S	0	EA	\$ 53,000	\$ -		\$ -	\$ 12,000	
5.1d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.1e	CCVT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.1f	Arresters	0	EA	\$ 6,500	\$ -		\$ -	\$ 8,000	
5.1g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	
5.1i	Station Service Transformers		LA.	200,000	7	30,000	7	250,000	7
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -		\$ -	\$ 47,500	
5.2c	VT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.2d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
5.3c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.3d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000			
	CCVT'S	0		\$ 8,000		\$ 8,000		\$ 16,000	
5.3f	Arresters	0		\$ 3,420				\$ 9,420	
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0		\$ -	\$ -		\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	L EQUIPTMENT / MATERIALS				\$ -		\$ -		\$ -
6. CONTROL H	L EQUIPTMENT / MATERIALS OUSE / PANELS / GENERATOR CONTROL HOUSE	0	EA	\$ 551,250		\$ 85,000		\$ 636,250	

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Protection and Telecom Equipment Panels	0	EA	\$	35,000	\$ -	\$ 10,000	\$ -	\$ 45,000	\$ -
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
6.4	Control Cables	0	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
	SCADA and Communications	0	EA	\$		\$ -		\$ -	\$ -	\$ -
	Low Voltage AC Distribution	0		\$,	\$ -	\$ 100,000	•	\$ 150,000	\$ -
	DC Distribution System	0	EA	\$	50,000		\$ 100,000			\$ -
	Security	0	EA	\$	7,500		\$ 7,500		\$ 15,000	
	Fire Alarm	0	EA	\$	7,500		\$ 7,500		\$ 15,000	\$ -
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
TOTAL CONT	OL HOUSE / DANIELS / CENEDATOR					À		^		•
7. MISC ITEMS	OL HOUSE / PANELS / GENERATOR					\$ -		\$ -		\$ -
	Conduit & Cable Trench System	0	LF	\$	185.00	\$ -	\$ 170.00	\$ -	\$ 355	\$ -
	Rigid Bus, Fittings & Insulators	1	LS	\$	15,008.40		\$ 56,904.00		\$ 71,912	
7.3	Strain Bus, Connectors & Insulators	0	LF	\$	13.38	\$ -	\$ 39.35	\$ -	\$ 53	\$ -
	Grounding System	0	LF	\$	6.93	\$ -	\$ 32.58	\$ -	\$ 40	
	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$ -
	Strain Bus Insulators - 230kV	0	EA	\$	1,400		\$ 750		\$ 2,150	\$ -
	Strain Bus Insulators - 115kV	0	EA	\$	1,000		\$ 550		\$ 1,550	•
	Low Voltage AC Station Service	0	LS	\$	50,000		\$ 75,000	\$ -	\$ 125,000	\$ -
	SSVT Service	0	LS	\$	45,000		\$ 45,000	\$ -	\$ 90,000	\$ -
	Control Conduits from Trench to Equipment	0	LS	\$	125,000		\$ 125,000	\$ -	\$ 250,000	\$ -
	Misc. Materials (Above and Below Ground)	0	LS	\$	180,000	\$ -	\$ 180,000	\$ -	\$ 360,000	\$ -
7.12										
7.13 7.14										
7.14										
7.16										
7.17										
7.18										
7.19										
7.20										
7.21										
7.22										
7.23										
7.24										
7.25										
TOTAL - MISC I						\$ 15,008		\$ 56,904		\$ 71,912
J. Porter	Substation - Install					\$ 15,008		\$ 56,904		\$ 71,912
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
	Mob / Demob	1	LS	\$	-	\$ -	\$ 719	\$ 719	\$ 719	\$ 719
	Project Management, Material Handling & Amenities									
1 87 1	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 2,598	\$ 2,598	\$ 2,598	\$ 2,598
8.3	Utility PM and Project Oversite	1	LS	1		\$ -	\$ 719	\$ 719	\$ 719	\$ 719
	Site Accommodation, Facilities, Storage	1	LS	\$		\$ -	\$ 719			
	Engineering			Ť.		•				
	Design Engineering	1	LS	\$	-	\$ -	\$ 5,753	\$ 5,753	\$ 5,753	\$ 5,753
	LiDAR	-	LS	\$		\$ -	\$ -		\$ -	\$ -
	Geotech	-	EA	\$	-	\$ -	\$ 3,500		\$ 3,500	
	Surveying/Staking	1	Site	\$	-	\$ -	\$ 503	\$ 503	\$ 503	\$ 503
	Testing & Commissioning									
	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 1,798	\$ 1,798	\$ 1,798	\$ 1,798
	Permitting and Additional Costs									

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Materia	al Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	тот	AL
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 216	\$ 216	\$ 216	\$	216
8.13	Real Estate Costs (New)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 1,201	. \$	1,201	\$ -	\$ -	\$ 1,201	\$	1,201
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 72	\$ 72	\$ 72	\$	72
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	1,201		\$ 13,097		\$	14,298

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J. SS Porter-Install

NAT & NYPA - T025 - (Segment A, + 765kV) K. Porter Substation - Removal

545,044

Total: \$

NAT & NYPA - T025 -	(Segment A, + 765	kV)			
		Supply	Installation		Total
K. Porter Substation - Removal					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	- !	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ 126,	500 :	\$ 126,600
3. SUBSTATION STRUCTURES	\$	-	\$ 206,	100	\$ 206,100
4. MAJOR EQUIPTMENT	\$	-	\$ 43,	500	\$ 43,500
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 59,	500	\$ 59,500
6. CONTROL HOUSE / PANELS	\$	-	\$	- :	\$ -
7. MISC ITEMS	\$	-	\$ 38,	513	\$ 38,613
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 70,	732	\$ 70,732
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	- :	\$ -
SUBTOTAL:	\$	-	\$ 545,)44 :	\$ 545,044
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	- :	\$ -
TOTAL:	Ś		\$ 545,)44 :	\$ 545,044

D	esc	crir	otic	n o	fΜ	/or	k:

Estimate Revision:

5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	r Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	3	EA	\$ -	\$ -	\$ 7,200	\$ 21,600	\$ 7,200	\$ 21,600
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000		\$ 11,000	
2.2e	Switch Stand Foundations	5	EA	\$ -	\$ -		\$ 26,000	\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	FA	Ś -	Ġ _	Ś -	\$ -	Ś -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ 2,400		\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations	4	EA	\$ -	\$ -	\$ 2,400	\$ 9,600	\$ 2,400	\$ 9,600
2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ -	\$ 2,400	\$ 14,400	\$ 2,400	\$ 14,400
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -			\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	'	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	'	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200		\$ 5,200	\$ -
2.3f	Fuse Stand Foundations	0		\$ -	\$ -	\$ -		\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0		\$ -	\$ -	\$ -		\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	·	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4		0	EA.	ć	ć	ć	\$ -	<u> </u>	\$ -
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	7	\$ - \$ -	7
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0		\$ -	\$ -	Ÿ		Ÿ	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ - \$ -	\$ - \$ -		'	\$ 42,000 \$ -	
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	U	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5a	Generator Foundation	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.50	deficiator i oundation	0	LA	-	-	-	-	· -	-
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.6c		0	EA	\$ -	š -	\$ -	·	\$ -	\$ -
		-		Ť	*	*	Ť	*	*
TOTAL - SUBST	TATION FOUNDATIONS				\$ -		\$ 126,600		\$ 126,600
	N STRUCTURES						, ,,,,,,,		, ,,,,,,
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -		\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand	0		\$ -	\$ -	\$ -		\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	'	\$ 27,000	
3.2b	Substation A-Frame Structures - Shared Column	5	EA	\$ -		\$ 27,000			
3.2c	Switch Stands	6		\$ -	\$ -				
3.2d	Station Service Transformer Stand	0		\$ -				\$ -	
3.2e	Bus Support 3ph	0		\$ -				\$ -	
3.2f	Bus Support 1 Ph	0		\$ -		\$ 2,250		\$ 2,250	
3.2g	Instrument Transformer Stand	6		\$ -		\$ 1,050		\$ 1,050	
3.2h	Arrester Stand	6		\$ -		\$ 1,050		\$ 1,050	
3.2j	Wave Trap Stand	0		\$ -		\$ 4,500		\$ 4,500	
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<u> </u>									D 46 -£60

3.3a Su 3.3b Su 3.3c Sv			Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3b St 3.3c Sv	15kV								
3.3c Sv	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3 34 [2:	witch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
J.Ju Fl	use Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	nstrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Nave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k M	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TION CERTIFICATION								
	TION STRUCTURES				\$ -		\$ 206,100		\$ 206,100
4. MAJOR EQUIP									
	M45kV				_	4		_	4
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d	22014/								
	230kV	3	EA	\$ -	\$ -	\$ 14,500	\$ 43,500	\$ 14,500	\$ 43,500
	Circuit Breakers	3			т	\$ 14,500 \$ 42,000	+,	\$ 14,500	
4.20 Ca	Capacitor Banks	U	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.2	15[A]								
	L15kV		EA.	ć	ć	ć	ć	ć	A
	Circuit Breakers Capacitor Banks	0		\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
4.30	apacitor banks	U	EA	3 -	, -	3 -	ş -	, -	-
TOTAL - MAJOR E	FOLIDTMENT				\$ -		\$ 43,500		\$ 43,500
	TMENT / MATERIALS				\$ -		\$ 43,500		\$ 43,500
	1WENT / WATERIALS								
	ine Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -		\$ -	\$ 5,500	
	/T'S	0	EA	\$ -	\$ -	\$ 3,300	\$ -	\$ 3,300	\$ -
	T'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
	Arresters	0		\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	
	Nave Traps	0	EA	\$ -	\$ -		\$ -	\$ 2,500	
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j	NATION SELVICE TRAISIONNESS		2,	*	· ·	,	Ÿ	Ÿ	*
5.2 23	230kV								
	ine Switches - 3ph w/ motor operator	2	EA	\$ -	\$ -	\$ 5,500	\$ 11,000	\$ 5,500	\$ 11,000
	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -		\$ 16,500	\$ 5,500	
	/T'S	2	EA	\$ -	\$ -	\$ 1,500		\$ 1,500	
	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	CCVT'S	6	EA	\$ -	\$ -	•	\$ 9,000	\$ 1,500	
	Arresters	6		\$ -	\$ -	\$ 2,500	\$ 15,000	\$ 2,500	
	Nave Traps	2	EA	\$ -	\$ -	\$ 2,500		\$ 2,500	
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3 11	115kV								
	ine Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500		\$ 5,500	
	/T'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0		\$ -	\$ -		\$ -		\$ -
	CCVT'S	0		\$ -			\$ -		\$ -
	Arresters	0		\$ -		\$ 1,500		\$ 1,500	
	Nave Traps	0		\$ -	\$ -		\$ -		\$ -
	Station Service Transformers	0		\$ -		\$ -	\$ -		\$ -
	uses	0		\$ -	\$ -		\$ -		\$ -
TOTAL - SMALL E	EQUIPTMENT / MATERIALS				\$ -		\$ 59,500		\$ 59,500

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6. CONTROL HO	DUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.2	Protection and Telecom Equipment Panels	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	SCADA and Communications	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Low Voltage AC Distribution	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CONT	ROL HOUSE / PANELS / GENERATOR				1		-		
7. MISC ITEMS	OL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
	Constitute O. Cololla Turanah Contains	0	EA.	Ś -	\$ -	ć 42.000.00	ć	ć 42.000	
	Conduit & Cable Trench System Rigid Bus, Fittings & Insulators	0	EA L.S.	\$ -	\$ - \$ -	\$ 42,000.00 \$ 18,937.50	\$ - \$ 18,938	\$ 42,000 \$ 18,938	
	Strain Bus, Connectors & Insulators	1		\$ -	\$ -	\$ 18,937.50		\$ 18,938	
	Grounding System	0	EA	\$ -	\$ -	\$ 19,675.00	\$ 19,675	\$ 19,675	
7.5	Grounding System	U	EA	-	· -	3 42,000.00	, -	3 42,000	-
7.6									
7.7									
7.7									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	TEMS				\$ -		\$ 38,613		\$ 38,613
V Dortor	Substation - Removal				\$ -		\$ 474,313		\$ 474,313
					, ·		\$ 474,313		\$ 474,515
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization			_	_				
	Mob / Demob	1	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 17,135	\$ 17,135	\$ 17,135	\$ 17,135
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Engineering								
	Design Engineering	1		\$ -			\$ 37,945	\$ 37,945	
	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Surveying/Staking	-	Site	\$ -	\$ -	\$ 3,320	\$ -	\$ 3,320	\$ -
	Testing & Commissioning								
	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 11,858	\$ -	\$ 11,858	\$ -
	Permitting and Additional Costs								
	Environmental Licensing & Permitting Costs	-	LS	\$ -		\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 1,423		\$ 1,423	
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17	Colon Taylor Materials	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ - \$ 474	\$ - \$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ - \$ -	\$ 474		\$ 474	
TOTAL - MOB/I	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 70,732		\$ 70,732

L. Interconnection Edic Station

Estimate Revision: 5 Total: \$ 2,100,762

NAT & NYPA - T025 - (:	Segment A, + 765	kV)		
		Supply	Installation	Total
L. Interconnection Edic Station				
1. CLEARING & ACCESS	\$	-	\$ 367,850	\$ 367,850
2. FOUNDATIONS	\$	168,366	\$ 170,169	\$ 338,536
3. STRUCTURES	\$	501,469	\$ 321,821	\$ 823,289
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	160,000	\$ 94,400	\$ 254,400
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	66,387	\$ 250,300	\$ 316,687
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	896,222	\$ 1,204,541	\$ 2,100,762
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	896,222	\$ 1,204,541	\$ 2,100,762

12 Clearing the ROW - Light (mowing)		Description of Work:												
1.1 Clearing the ACOW - New yimoning & cleaning Acre S	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost			Total Unit Rate	TOTAL				
1.1 Clearing the ROW - Leary (moving & clearing) Acre 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	L. Interco	onnection Edic Station												
12 Clearing the ROW - Light (mowing)	1. CLEARING &	ACCESS												
13	1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -				
1.4 SIF PRICE 3,500.0 U S S S S S 1,400.0 S S 1,500.0 S S S S S S S S S									-					
1.5 Matting: Access and ROW 3,500.0 F S S S 70 S 245,000 S 70 S 245, 000 S 70 S 245, 000 S 70 S 245, 000 S 70 S 245, 000 S 70 S 245, 000 S 70 S 245, 000 S 70 S 245, 000 S 70 S 245, 000 S 70 S 245, 000 S 70 S 245, 000 S S S S S S S S S						'								
1.6 Matting - To Work Area 30.0 IF \$ - \$ \$ - \$ \$ 70 \$ 21,000 \$ 70 \$ 21, 1														
1.7 Show Removal - 1.5 \$ - \$ \$ \$ \$ \$ \$ \$ \$						т								
1.8 ROW Restoration 0.5 Mile S - S - S 1,000 S 5,000 S 1,000 S 5,000 S 1,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,000 S 5,0			300.0			'								
19 Work Pads 20,0000 SF S S S S S S S S				LS	\$ -	\$ -								
1.10 Restoration for Work Pad areas 4,000.0 SF S S S S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C C	1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000							
1.11 Temporary Access Bridge	1.9	Work Pads	20,000.0	SF	\$ -	\$ -	\$ 4	\$ 70,400	\$ 4	\$ 70,400				
1.12 Air Bridge	1.10	Restoration for Work Pad areas	4,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 600	\$ 0	\$ 600				
1.12 Air Bridge	1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -				
1.13 Stabilized Construction Entrance			-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -				
1.14 Maintenance and Protection of Traffic on Public Roads	1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -				
1.16 Culverts / Misc. Access - EA S 750 S - S 1,250 S - S 2,000 S	1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -		\$ -						
1.16 Culverts / Misc. Access - EA S 750 S - S 1,250 S - S 2,000 S	1.15	Gates	-	EA	\$ 2.000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -				
1 EA \$. \$. \$. 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850			-	EA				\$ -						
1.18			1					\$ 1.850						
1.19					,	s -	,		, , , , , , , , , , , , , , , , , , , ,					
1.20 Crushed Rock						\$ -								
2. FOUNDATIONS Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Soli		Crushed Rock	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -				
2.1 Foundation – Drilled Pier – 8'X 27' 2.2 Foundation – Drilled Pier – 8'X 29' 3 EA \$ 41,332 \$ 123,995 \$ 41,774 \$ 125,322 \$ 83,106 \$ 249, 2.2 Foundation – Drilled Pier – 8'X 29' 1 EA \$ 44,372 \$ 44,372 \$ 44,847 \$ 44,847 \$ 89,219 \$ 89, 2.3 Rock Excavation Adder	TOTAL - CLEAR	ING & ACCESS				\$ -		\$ 367,850		\$ 367,850				
2.2 Foundation – Drilled Pier – 8'X 29' 1 EA \$ 44,372 \$ 44,372 \$ 44,847 \$ 44,847 \$ 89,219 \$ 89, 2.3 Rock Excavation Adder - CY \$ - \$ - \$ 2,000 \$ - \$ 2,000 \$ 2.4 2.5 2.6 2.7 2.8 2.9 2.10 2.11 2.12	2. FOUNDATIO	NS												
2.2 Foundation – Drilled Pier – 8'X 29' 1 EA \$ 44,372 \$ 44,372 \$ 44,847 \$ 44,847 \$ 89,219 \$ 89, 2.3 Rock Excavation Adder - CY \$ - \$ - \$ 2,000 \$ - \$ 2,000 \$ 2.4 2.5 2.6 2.7 2.8 2.9 2.10 2.11 2.12	2.1	Foundation – Drilled Pier – 8'X 27'	3	EA	\$ 41,332	\$ 123,995	\$ 41,774	\$ 125,322	\$ 83,106	\$ 249,317				
2.3 Rock Excavation Adder - CY \$ - \$ - \$ 2,000 \$ - \$ 2,000 \$ 2.4 2.5 2.6 2.6 2.7 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8	2.2	Foundation – Drilled Pier – 8'X 29'	1	EA										
2.5 2.6 2.7 2.8 2.9 2.10 2.11 2.12			-	СУ	\$ -	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -				
2.6 2.7 2.8 2.9 2.10 2.11 2.12	2.4													
2.7 2.8 2.9 2.10 2.11 2.12														
2.8 2.9 2.10 2.11 2.12														
2.9 2.10 2.11 2.12	2.7													
2.10 2.11 2.12	2.8													
2.11 2.12	2.9													
2.12	2.10													
2.12	2.11													
4.13	2.13													

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Su	upply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.14										
2.15	DATIONS					¢ 169.366		\$ 170,169		ć 220 F26
TOTAL - FOUN 3. STRUCTURE						\$ 168,366		\$ 170,169		\$ 338,536
3.1	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) – 105′	3	Structure	\$	98,883	\$ 296,648	\$ 59,330	\$ 177,989	\$ 158,212	\$ 474,636
3.2	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15 °-60°) - 115'	1	Structure	\$	202,797	\$ 202,797	\$ 121,678			\$ 324,475
3.3	Install Grounding and Grounding Accessories	4	Pole	\$	506	\$ 2,024	\$ 5,539	\$ 22,154		\$ 24,178
3.4	<u> </u>					\$ -		\$ -	,	\$ -
3.5										
3.6						\$ -		\$ -		\$ -
3.7						\$ -		\$ -		\$ -
3.8						\$ -		\$ -		\$ -
3.9						\$ -		\$ -		\$ -
3.10						\$ - \$ -		\$ - \$ -		\$ - \$ -
3.11 3.12						\$ - \$ -		\$ - \$ -		\$ -
3.13						\$ -		\$ -		\$ -
3.14						\$ -		\$ -		\$ -
								T		*
3.15						\$ -		\$ -		\$ -
TOTAL - STRUC						\$ 501,469		\$ 321,821		\$ 823,289
	R, SHIELDWIRE, OPGW									
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$		\$ -	\$ 5.00			\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.55	\$ -	\$ 5.00	\$ -		\$ -
4.3	(1) 3/8" EHS7 Steel	-	LF Mile	\$	0.72	\$ - \$ -	\$ 5.00 \$ 30,000	\$ -		\$ - \$ -
4.5	Remove Existing Cable From Existing Structures Remove Existing OPGW Cable	-	Mile	\$	-	\$ - \$ -	\$ 30,000 \$ 12,000	\$ - \$ -	\$ 30,000.00	\$ - \$ -
4.7	Remove Existing 61 GW Cable Remove Existing EH7	-	Mile	Ś	-	\$ -	\$ 12,000	\$ -		\$ -
4.8	nemove Existing 217		· · · · · ·	7		Ÿ	7 12,000	Ť	\$ 12,000.00	*
4.9		-								
4.10	Rider Poles - Relocated	-	Set	\$	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$	1,750	\$ -	\$ 3,500	\$ -	\$ 5,250.00	\$ -
	UCTOR, SHIELDWIRE, OPGW:					\$ -		\$ -		\$ -
	, FITTINGS, HARDWARE									
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)									
5.3	115kV Tangent (1-Group of 9-Bells Each Assembly) 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$	1,800	\$ 108,000	\$ 720	\$ 43,200	\$ 2,520	\$ 151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	00	Assembly	1	1,000	7 100,000	7 720	7 43,200	2,320	7 151,200
5.5	OPGW Assembly - Tangent	-	Assembly	\$	200	\$ -	\$ 150	\$ -	\$ 350	\$ -
5.6	OPGW Assembly - Angle / DE	4	Assembly	\$	250	\$ 1,000	\$ 150	\$ 600		\$ 1,600
5.7	OHSW Assembly - Angle / DE	4	Assembly	\$	250	\$ 1,000	\$ 150	\$ 600	\$ 400	\$ 1,600
5.8	OPGW Splice Boxes	-	Set	\$	1,750	\$ -	\$ 1,746	\$ -	\$ 3,496	\$ -
5.9	OPGW Splice & Test	-	EA	\$	1,400	\$ -	\$ 2,520	\$ -	\$ 3,920	\$ -
5.10	Spacer - Conductor	-	EA	\$	50	\$ -	\$ 35			\$ -
5.11	Vibration Dampers - Conductor	-	EA	\$	35	\$ -	\$ 35	\$ -	\$ 70	\$ -
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$ -
5.13	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$ -
5.14	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$ -
5.15			-	T.		\$ -	, ,,,,,,	\$ -	, ,,,,,	\$ -
5.16										
5.17			· ·			\$ -		\$ -		\$ -
5.18						\$ -		\$ -		\$ -
5.19	Interconnection Arrangements	1	EA	\$,		\$ 50,000		\$ 100,000	\$ 100,000
5.20	ATOR FITTINGS HARRIMARS					\$ -		\$ -		\$ -
	ATOR, FITTINGS, HARDWARE					\$ 160,000		\$ 94,400		\$ 254,400
L. Interc	onnection Edic Station					\$ 829,835		\$ 954,240		\$ 1,784,075
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization						•			
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 64,450	\$ 64,450	\$ 64,450	\$ 64,450

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e Ma	aterial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 89,204	\$ 89,204	\$ 89,204	\$ 89,204
6.6	LiDAR	-	LS	\$ -	\$	-	\$ 5,352	\$ -	\$ 5,352	\$ -
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 12,489	\$ 12,489	\$ 12,489	\$ 12,489
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 5,352	\$ 5,352	\$ 5,352	\$ 5,352
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 66,38	7 \$	66,387	\$ -	\$ -	\$ 66,387	\$ 66,387
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 1,784	\$ 1,784	\$ 1,784	\$ 1,784
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	66,387		\$ 250,300		\$ 316,687

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NAT & NYPA - T025 - (Segment A, + 765kV) M. Interconnection New Scotland Station

Estimate Revision: 5 Total: \$ 3,070,215

NAT & NYPA - T025 - (Se	gment A, + 76	5kV)				
		Supply		Installation		Total
M. Interconnection New Scotland Station						
1. CLEARING & ACCESS	\$	-	\$	367,850	\$	367,850
2. FOUNDATIONS	\$	365,657	\$	473,093	\$	838,749
3. STRUCTURES	\$	655,465	\$	445,628	\$	1,101,092
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,555	\$	26,100	\$	29,655
5. INSULATORS, FITTINGS, HARDWARE	\$	161,130	\$	95,795	\$	256,925
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	94,864	\$	381,079	\$	475,944
CONTRACTOR MARK-UP (OH&P)	\$	-	\$		\$	-
SUBTOTAL:	\$	1,280,670	\$	1,789,545	\$	3,070,215
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	1.280.670	Ś	1.789.545	Ś	3.070.215

n	Acci	·in	tio	n of	Wo	rk·
	resui	ıp	uu		VVO	n.

Item	Item Description	Estimated Quantity	Unit of Measure	Mat	erial Supply Rate	Material Sup	ply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	ТОТА	AL
M. Inter	connection New Scotland Station											
1. CLEARING 8	ACCESS											
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$	-	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$	-	\$ 5,000	\$ 10,000	\$ 5,000	\$	10,000
1.3	Access Road	-	LF	\$	-	\$	-	\$ 45	\$ -	\$ 45	\$	-
1.4	Silt Fence	3,500.0	LF	\$	-	\$	-	\$ 4	\$ 14,000	\$ 4	\$	14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$	-	\$ 70	\$ 245,000	\$ 70	\$	245,000
1.6	Matting - To Work Area	300.0	LF	\$	-	\$	-	\$ 70	\$ 21,000	\$ 70	\$	21,000
1.7	Snow Removal	-	LS	\$	-	\$	-	\$ 516,800	\$ -	\$ 516,800	\$	-
1.8	ROW Restoration	0.5	Mile	\$	-	\$	-	\$ 10,000	\$ 5,000	\$ 10,000	\$	5,000
1.9	Work Pads	20,000.0	SF	\$	-	\$	-	\$ 4	\$ 70,400	\$ 4	\$	70,400
1.10	Restoration for Work Pad areas	4,000.0	SF	\$	-	\$	-	\$ 0.2	\$ 600	\$ 0	\$	600
1.11	Temporary Access Bridge	-	EA	\$	-	\$	-	\$ 20,035	\$ -	\$ 20,035	\$	-
1.12	Air Bridge	-	EA	\$	-	\$	-	\$ 14,445	\$ -	\$ 14,445	\$	-
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$	-	\$ 4,580	\$ -	\$ 4,580	\$	-
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$	-	\$ 4,130	\$ -	\$ 4,130	\$	-
1.15	Gates	-	EA	\$	2,000	\$	-	\$ 2,500	\$ -	\$ 4,500	\$	-
1.16	Culverts / Misc. Access	-	EA	\$	750	\$	-	\$ 1,250	\$ -	\$ 2,000	\$	-
1.17	Concrete Washout Station	1	EA	\$	-	\$	-	\$ 1,850	\$ 1,850	\$ 1,850	\$	1,850
1.18						\$	-		\$ -		\$	-
1.19						\$	-		\$ -		\$	-
1.20	Crushed Rock	0	CY	\$	27	\$	-	\$ 75		\$ 102	\$	-
TOTAL - CLEA	RING & ACCESS					\$	-		\$ 367,850		\$	367,850
2. FOUNDATION	ONS											
2.1	Foundation – Drilled Pier – 8'X 50'	3	EA	\$	-,		229,501		\$ 231,959		\$	461,459
2.2	Foundation – Drilled Pier – 8'X 89'	1	EA	\$	136,156	\$	136,156	\$ 137,614	\$ 137,614	\$ 273,770	\$	273,770
2.3	Rock Excavation Adder	51.8	CY	\$	-	\$	-	\$ 2,000	\$ 103,520	\$ 2,000	\$	103,520
2.4												
2.5												
2.6												
2.7												
2.8												
2.9				-								
2.10				-								
2.11												
2.13												
2.14												$\overline{}$

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ltem	Item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.15											
TOTAL - FOUN						\$ 365,657		\$ 473,093		\$	838,749
3. STRUCTURE		-	<u> </u>		170.006	A 504.077	400.045	4 222 445	201.011		27.1.722
3.1	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115' 1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	3	Structure	\$,	\$ 534,077 \$ 116,328		\$ 320,446			854,522
3.2	Install Grounding and Grounding Accessories	10	Structure Structure	\$	116,328 506			\$ 69,797 \$ 55,385			186,125 60,445
3.4	Install Grounding and Grounding Accessories	10	Structure	17	300	\$ -	3,333	\$ 33,363	3 0,043	,	00,443
3.5						, ·		Ÿ			
3.6						\$ -		\$ -			
3.7						\$ -		\$ -			
3.8						\$ -		\$ -			
3.9						\$ -		\$ -		L	
3.10						\$ -		\$ -		↓	
3.11						\$ -		\$ -		—	
3.12						\$ -		\$ -		—	
3.13				1		\$ -		\$ -			
3.14				1		\$ -		\$ -		<u> </u>	
3.15				1		\$ -		\$ -		1	
TOTAL - STRU	CTURES					\$ 655,465		\$ 445,628		\$	1,101,092
4. CONDUCTO	R, SHIELDWIRE, OPGW					, , , , ,		, , , , ,			
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	1,500	LF	\$	1.90	\$ 2,850	\$ 5.00	\$ 7,500	\$ 6.90	\$	10,350
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35	\$ -	\$ 5.00				-
4.3	(1) 3/8" EHS7 Steel	1,500	LF	\$	0.47						8,205
4.5	Remove Existing 345kV Cable From Existing Structures	0.3	Mile	\$	-	\$ -	\$ 30,000	, , , , , , , , , , , , , , , , , , , ,			7,500
4.6	Remove Existing OPGW Cable	-	Mile	\$		\$ -	\$ 12,000		\$ 12,000.00		-
4.7	Remove Existing EH7	0.3	Mile	\$	-	\$ -	\$ 12,000	\$ 3,600	\$ 12,000.00	<u>\$</u>	3,600
4.8											
4.10	Rider Poles - Relocated	-	Set	Ś	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$	
4.11	Rider Poles	-	EA	Ś	1,750		\$ 3,500		\$ 5,250.00		
	UCTOR, SHIELDWIRE, OPGW:			Ť	1,750	\$ 3,555		\$ 26,100	7 0,2000	Ś	29,655
5. INSULATOR	, FITTINGS, HARDWARE					, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , , ,			
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$	1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$	-
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$		\$ -	\$ 560		\$ 1,460		-
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$,	\$ 108,000					151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900	\$ -	\$ 560				-
5.5	OPGW Assembly - Tangent	-	Assembly	\$	200		\$ 150		\$ 350		-
5.6	OPGW Assembly - Angle / DE	-	Assembly	\$		\$ -	\$ 150				-
5.7	OHSW Assembly - Angle / DE	4	Assembly	\$	250						1,600
5.8 5.9	OPGW Splice Boxes OPGW Splice & Test	-	Set EA	\$	1,750 1,400	•	\$ 1,746 \$ 2,520		\$ 3,496 \$ 3,920		-
5.10	Spacer - Conductor	9	EA	\$	50				\$ 3,320		765
5.11	Vibration Dampers - Conductor	48	EA	Š	35				\$ 70		3,360
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27		\$ 35	· ' '	\$ 62		-
		-									
5.13	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.14	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$	-
5.15						\$ -		\$ -		\$	-
5.16	Interconnection Arrangements	1	EA	\$	50,000	\$ 50,000	\$ 50,000		\$ 100,000		100,000
5.17				-		\$ -		\$ -		\$	-
5.18				1		\$ -	1	\$ -		\$	-
5.19				1		\$ - \$ -	+	\$ -		\$	-
5.20	 ATOR, FITTINGS, HARDWARE					\$ - \$ 161,130		\$ 95,795		\$	256,925
										,	
	connection New Scotland Station					\$ 1,185,806		\$ 1,408,465		\$	2,594,271
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization			1.			1.			<u> </u>	
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$	25,943
——	Project Management, Material Handling & Amenities			+			+				
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 93,718	\$ 93,718	\$ 93,718	\$	93,718

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 129,714	\$ 129,714	\$ 129,714	\$ 129,714
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 18,160	\$ 18,160	\$ 18,160	\$ 18,160
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 94,864	\$ 94,864	\$ -	\$ -	\$ 94,864	\$ 94,864
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 2,594	\$ 2,594	\$ 2,594	\$ 2,594
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 94,864		\$ 381,079		\$ 475,944

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M. In. New Scotland SS

N. Interconnection Rotterdam Station

Total: \$ 4,553,958

NAT & NYPA - T025 - (Segment	A, + 70	65kV)		
		Supply	Installation	Total
N. Interconnection Rotterdam Station				
1. CLEARING & ACCESS	\$	-	\$ 1,233,050	\$ 1,233,050
2. FOUNDATIONS	\$	192,145	\$ 325,963	\$ 518,108
3. STRUCTURES	\$	546,722	\$ 837,150	\$ 1,383,872
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	65,923	\$ 437,250	\$ 503,173
5. INSULATORS, FITTINGS, HARDWARE	\$	165,730	\$ 118,480	\$ 284,210
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	77,642	\$ 553,904	\$ 631,545
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,048,161	\$ 3,505,797	\$ 4,553,958
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,048,161	\$ 3,505,797	\$ 4,553,958

NAT & NYPA - T025 - (Segment A, + 765kV)

Ì	escri	ption	of W	ork:

Estimate

Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Interd	onnection Rotterdam Station								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	7.0	Acre	\$ -	\$ -	\$ 15,000	\$ 105,000	\$ 15,000	\$ 105,000
1.2	Clearing the ROW - Light (mowing)	5.0	Acre	\$ -	\$ -	\$ 5,000	\$ 25,000	\$ 5,000	\$ 25,000
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	4,800.0	LF	\$ -	\$ -	\$ 4	\$ 19,200		
1.5	Matting - Access and ROW	4,800.0	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	2,400.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800		\$ 516,800	
1.8	ROW Restoration	1.0	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	160,000.0	SF	\$ -	\$ -	\$ 4	1,		\$ 563,200
1.10	Restoration for Work Pad areas	32,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 4,800		\$ 4,800
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130		\$ 4,130	
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	-	EA	\$ 750		\$ 1,250		\$ 2,000	
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	СҮ	\$ 27	*	\$ 75		\$ 102	
	ING & ACCESS				\$ -		\$ 1,233,050		\$ 1,233,050
2. FOUNDATIO	,	-							
2.1	10' ED Rock BF	6	EA	\$ 358	\$ 2,145	\$ 3,575	\$ 21,450	\$ 3,933	\$ 23,595
2.2	15' ED Rock BF	18		\$ 536		·	\$ 96,525		
2.3	20' ED Rock BF	4	EA	\$ 715	\$ 2,860	\$ 7,150	\$ 28,600	\$ 7,865	\$ 31,460
2.4	Foundation – Drilled Pier – 8'X 29'	4	EA	\$ 44,372	\$ 177,487	\$ 44,847	\$ 179,388	\$ 89,219	\$ 356,875
2.5	Rock Excavation Adder	-	CY	\$ -	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ -		\$ -
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supp	oly Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.13						\$ -		\$ -		\$ -
2.14						\$ -		\$ -		\$ -
2.15 TOTAL - FOUN	DATIONS					\$ - \$ 192,145		\$ - \$ 325,963		\$ - \$ 518,108
3. STRUCTURE						3 192,143		\$ 323,903		3 316,106
3.1	15kV 3-CKT TANGENT DIST WOOD POLE	3	Pole	\$	3,500	\$ 10,500	\$ 3,600	\$ 10,800	\$ 7,100	\$ 21,300
3.2	15Kv 3-CKT MA DIST WOOD POLE	1	Pole	\$	3,500	\$ 3,500	\$ 3,600	\$ 3,600		\$ 7,100
3.3	15kV 3-CKT DE - WOOD POLE	2	Pole	\$	3,500	\$ 7,000	\$ 3,600	\$ 7,200		\$ 14,200
3.4	115kV 1-CKT TANGENT - WOOD POLE	5	Pole	\$	4,500	\$ 22,500	\$ 4,400	\$ 22,000	,	\$ 44,500
3.5	115kV 1-CKT MA - WOOD POLE 115kV 1-CKT DE - WOOD POLE	2 11	Pole Pole	\$	4,500 5,500	\$ 9,000 \$ 60,500	\$ 4,400 \$ 5,000	\$ 8,800 \$ 55,000		\$ 17,800 \$ 115,500
3.7	115kV 2-CKT TANGENT - WOOD POLE	4	Pole	\$	5,500	\$ 22,000	\$ 5,000	\$ 20,000		\$ 42,000
3.8	115kV 2-CKT DE - STEEL POLE	4	Pole	<u> </u>	98,883	\$ 395,530	\$ 59,330			\$ 632,848
3.9	Remove Existing Structure	24	EA	ľ		\$ -	\$ 12,300	\$ 295,200		\$ 295,200
3.10						\$ -		\$ -		\$ -
3.11						\$ -		\$ -		\$ -
3.12	Install Grounding and Grounding Accessories	32	Structure	\$	506	\$ 16,192	\$ 5,539	\$ 177,232	,	\$ 193,424
3.13						\$ -		\$ -		\$ -
3.14						\$ -		\$ -		\$ -
3.15 TOTAL - STRU	CTURES					\$ - \$ 546,722		\$ - \$ 837,150		\$ - \$ 1,383,872
	R, SHIELDWIRE, OPGW					3 340,722		\$ 657,130		3 1,303,672
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	23,400	LF	\$	1.90	\$ 44,460	\$ 5.00	\$ 117,000	\$ 6.90	\$ 161,460
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35	\$ -	\$ 5.00	\$ -	\$ 6.35	\$ -
4.3	(1) 3/8" EHS7 Steel	7,800	LF	\$	0.47	\$ 3,666	\$ 5.00	\$ 39,000		\$ 42,666
4.5	Remove Existing Cable	6.6	Mile	\$		\$ -	\$ 30,000	\$ 197,700	·	\$ 197,700
4.6	Remove Existing EH7	2.2	Mile	\$		\$ -	\$ 12,000	\$ 26,400	, , , , , , ,	\$ 26,400
4.7	15kV - (1) 477kcmil 26/7 ACSR "Hawk" 15kV - (1) 336kcmil 26/7 ACSR "Linnet"	9,630 1,800	LF LF	\$	1.62 1.22	\$ 15,601 \$ 2,196	\$ 5.00 \$ 5.00	\$ 48,150 \$ 9,000		\$ 63,751 \$ 11,196
4.8	13KV - (1) 336KCHIII 26/7 ACSK LIIIIIEL	1,800	LF	3	1.22	\$ 2,190	\$ 5.00	\$ 9,000	\$ 0.22	\$ 11,196
4.10	Rider Poles - Relocated	-	Set	s	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$	1,750	\$ -	\$ 3,500	\$ -		\$ -
	UCTOR, SHIELDWIRE, OPGW:					\$ 65,923		\$ 437,250		\$ 503,173
	, FITTINGS, HARDWARE									
5.1	115kV Tangent (1-Group of 9-Bells Each Assembly)	33	Assembly	\$	1,000	\$ 33,000	\$ 560	\$ 18,480	, , , , , , , , , , , , , , , , , , , ,	\$ 51,480
5.2	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 15kV Tangent	66	Assembly	\$	1,000 100	\$ 66,000 \$ 1,200	\$ 560 \$ 75	\$ 36,960 \$ 900		\$ 102,960 \$ 2,100
5.4	15kV Dead-end & Angle Insulators	18	Assembly Assembly	\$	100	\$ 1,800	\$ 75			\$ 3,150
5.5	Neutral, Distribution, Tangent	4	Assembly	Š	100	\$ 400	\$ 75			\$ 700
5.6	Neutral, Distribution, DE/Side	2	Assembly	\$	100	\$ 200	\$ 75			\$ 350
5.7	Jumper, DE/Angle, 3PH	4	Assembly	\$	100	\$ 400	\$ 75	\$ 300	\$ 175	\$ 700
5.8	OPGW Assembly - Tangent	2	Assembly	\$	200	\$ 400	\$ 150			\$ 700
5.9	OSHW Assembly - Tangent	11	Assembly	\$	250	\$ 2,750	\$ 150	\$ 1,650	\$ 400	\$ 4,400
5.10	OHSW Assembly - Angle / DE	38	Assembly	\$	250	\$ 9,500	\$ 150 \$ 1.746	\$ 5,700		\$ 15,200
5.11	OPGW Splice Boxes	-	Set	<u>'</u>	_,	\$ -	- ,- · · ·		,	\$ -
5.12	OPGW Splice & Test	-	EA	\$	1,400	\$ -	\$ 2,520	\$ -	\$ 3,920	<u>\$</u> -
5.13 5.14	Spacer - Conductor Vibration Dampers - Conductor	-	EA EA	\$	50 35	\$ - \$ -	\$ 35 \$ 35			\$ - \$ -
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA EA	\$	27	\$ - \$ -	\$ 35			\$ -
5.16	Guys, Anchors, and Accessories	14.0	EA	\$	720	\$ 10,080	\$ 885	\$ 12,390		\$ 22,470
5.17	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -		\$ -
5.18						\$ -		\$ -		\$ -
5.19	Interconnection Arrangements	8	EA	\$		\$ 40,000	\$ 5,000			\$ 80,000
5.20 5.21				-		<u>\$</u> - \$ -		\$ - \$ -		\$ - \$ -
5.21				1		\$ - \$ -		\$ -		\$ - \$ -
5.23						\$ -		\$ -		\$ -
	ATOR, FITTINGS, HARDWARE					\$ 165,730		\$ 118,480		\$ 284,210
N. Interd	connection Rotterdam Station					\$ 970,519		\$ 2,951,893		\$ 3,922,412
6. MOB/DEM	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
	•									Page 56 of 60

Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	oply Rate	Material Supply Cost	Labor & Eq Supply		Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$	39,224	\$ 39,224	\$ 39,224	\$ 39,224
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$	141,697	\$ 141,697	\$ 141,697	\$ 141,697
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$	39,224	\$ 39,224	\$ 39,224	\$ 39,224
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$	39,224	\$ 39,224	\$ 39,224	\$ 39,224
	Engineering										
6.5	Design Engineering	1	LS	\$		\$ -	\$	196,121	\$ 196,121	\$ 196,121	\$ 196,121
6.6	Lidar	1	LS	\$	-	\$ -	\$	11,767	\$ 11,767	\$ 11,767	\$ 11,767
6.7	Geotech	1	Location	\$	-	\$ -	\$	3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$	27,457	\$ 27,457	\$ 27,457	\$ 27,457
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$	40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$		\$ -	\$	-	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$	11,767	\$ 11,767	\$ 11,767	\$ 11,767
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$	77,642	\$ 77,642	\$	-	\$ -	\$ 77,642	\$ 77,642
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$	3,922	\$ 3,922	\$ 3,922	\$ 3,922
OTAL - MOE	B/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 77.642			\$ 553,904		\$ 631,545

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System Upgrade Facilities (765kV Corona Mitigation)

Estimate Revision: 5 Total: \$ 103,575,563

SYSTEM UPG	RADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF 1	Transmission								
1.1	765kV S/C (2)-Steel H-Pole Tangent Structure (125ft.) w/ Foundation	48.00	EA	\$ 238,985	\$ 11,471,280	\$ 194,435	\$ 9,332,880	\$ 433,420	\$ 20,804,160
1.2	765kV S/C (2)-Steel H-Pole Tangent Structure (145ft.) w/ Foundation	10.00	EA	\$ 275,985	\$ 2,759,850	\$ 216,635	\$ 2,166,350	\$ 492,620	\$ 4,926,200
1.3	765kV S/C (2)-Steel H-Pole Tangent Structure (265ft.) w/ Foundation	1.00	EA	\$ 585,200	\$ 585,200	\$ 451,850	\$ 451,850	\$ 1,037,050	\$ 1,037,050
1.4	765kV S/C (2)-Steel H-Pole Tangent Structure (275ft.) w/ Foundation	1.00	EA	\$ 540,700	\$ 540,700	\$ 398,150	\$ 398,150	\$ 938,850	\$ 938,850
1.5	765kV S/C 3-Steel Pole Medium Angle Structure (130ft.) W/ Foundation	15.00	EA	\$ 947,650	\$ 14,214,750	\$ 776,150	\$ 11,642,250	\$ 1,723,800	\$ 25,857,000
1.6	765kV S/C 3-Steel Pole Medium Angle Structure (150ft.) W/ Foundation	2.00	EA	\$ 1,086,400	\$ 2,172,800	\$ 859,400	\$ 1,718,800	\$ 1,945,800	\$ 3,891,600
1.7	Conductor and Accessories	1.00	LS	\$ 5,209,340	\$ 5,209,340	\$ 5,819,250	\$ 5,819,250	\$ 11,028,590	\$ 11,028,590
1.8	Hardware Replacement on Existing Tangent Structures (From Church Rd to New Scotland Bypass)	1.00	LS	\$ 3,150,000	\$ 3,150,000	\$ 4,725,000	\$ 4,725,000	\$ 7,875,000	\$ 7,875,000
1.9	Hardware Replacement on Existing Angle/Deadend Structures (From Church Rd to New Scotland Bypass)	1.00	LS	\$ 1,530,000	\$ 1,530,000	\$ 2,652,000	\$ 2,652,000	\$ 4,182,000	\$ 4,182,000
1.10	Removal of Existing Structures and Conductor (From New Scotland Bypass to Knickerbocker)	1.00	LS	\$ -	\$ -	\$ 2,320,000	\$ 2,320,000	\$ 2,320,000	\$ 2,320,000
	Subtotal Direct Cost				\$ 41,633,920		\$ 41,226,530		\$ 82,860,450
1.11	Indirect Cost (25% of Direct Cost)		-						\$ 20,715,113
	TOTAL:								\$ 103,575,563

System Upgrade Facilities (Various Stations for Edic/Marcy to New Scotland)

Estimate Prevision: 5 Total: \$ 6,899,000

SYSTEM UPGE	ADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF SS1	Marcy 345kV Bay 3300 - Reconductor Strain Bus	1	LS	\$ -	\$ -	¢ .	¢ .	\$ 664,560	\$ 665,000
301 331	UNS-18 Marcy-New Scotland Line			,	,	,	·		,
SUF SS1	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 30,000	
SUF SS1	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 174,000
SUF SS1	SUF SS1 - TOTAL:				\$ -		\$ -		\$ 869,000
	Marcy 345kV Bay 3100 - Reconductor Strain Bus, Replace (3) breakers and wave								
SUF SS2	trap	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 2,946,086	\$ 2,947,000
	UE1-7- Marcy-Edic Line								
SUF SS2	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 120,720	
SUF SS2	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 767,000
SUF SS2	SUFSS 2 - TOTAL:				\$ -		\$ -		\$ 3,835,000
SUF SS3	Edic 345kV Bay - UE1-7- Marcy-Edic Line	1	LS					\$ 1,661,294	\$ 1,662,000
SUF SS3	Replace (2) breakers and wave trap Removals	1	LS	s -	\$ -	\$ -	\$ -	\$ 93,120	\$ 94,000
SUF SS3	Engineering, T&C, PM, Indirects (25%)		LS %		T	7	*	7 55,225	\$ 439,000
SUF SS3	SUF SS3 - TOTAL:				Ś -		\$ -		\$ 2,195,000
SUF SS4		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS4	Removals		LS %					\$ -	\$ -
SUF SS4	Engineering, T&C, PM, Indirects (25%)		LS %						\$ -
SUF SS4	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
SUF SS5		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS5	Removals		LS %					\$ -	\$ -
SUF SS5	Engineering, T&C, PM, Indirects (25%)		LS %						\$ -
SUF SS5	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
	STATIONS SUF DIRECT TOTAL:								\$ 5,519,000
	STATIONS SUF INDIRECT TOTAL:								\$ 1,380,000
	STATIONS SUF TOTAL								\$ 6,899,000

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NAT & NYPA - T025 - (Segment A, + 765kV) R. Knickerbocker Substation - Install

Total: \$ 82,734,279

NAT & NYPA - T025 - (S	Segment A, +	765kV)		
		Supply	Installation	Total
R. Knickerbocker Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	926,950	\$ 10,925,250	\$ 11,852,200
2. SUBSTATION FOUNDATIONS	\$	3,740,976	\$ 3,864,890	\$ 7,605,866
3. SUBSTATION STRUCTURES	\$	1,874,050	\$ 1,874,050	\$ 3,748,100
4. MAJOR EQUIPTMENT	\$	12,366,667	\$ 2,400,000	\$ 14,766,667
5. SMALL EQUIPTMENT / MATERIALS	\$	4,105,500	\$ 1,165,500	\$ 5,271,000
6. CONTROL HOUSE / PANELS	\$	3,114,700	\$ 1,556,200	\$ 4,670,900
7. MISC ITEMS	\$	7,876,951	\$ 11,375,341	\$ 19,252,292
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	2,720,463	\$ 12,846,791	\$ 15,567,255
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	36,726,257	\$ 46,008,022	\$ 82,734,279
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	36,726,257	\$ 46,008,022	\$ 82,734,279

	of Wor	

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
R. Knick	erbocker Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	45	ACRES	\$ -	\$ -	\$ 203,000	\$ 9,135,000	\$ 203,000	\$ 9,135,000
1.2	Station stone within substation fence.	14,600	CY	\$ 27	\$ 394,200			\$ 102	
1.3	Substation Fence	5,100	LF	\$ 100	\$ 510,000	\$ 100	\$ 510,000	\$ 200	\$ 1,020,000
1.4									
1.5									
1.6	Permanent Access Road - 20'-Wide (From Muitzeskill RD)	650	LF	\$ 35	\$ 22,750	\$ 285	\$ 185,250	\$ 320	\$ 208,000
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15	DEED CONTROL SERVICE CONTROL				4 025.050		40.005.050		44.052.200
	PREP/ GRADING/ FENCING / CIVIL N FOUNDATIONS				\$ 926,950		\$ 10,925,250		\$ 11,852,200
2.508514110	765kV								
2.1a	Circuit Breaker Foundations	3	EA.	\$ 22,410	\$ 67,230	\$ 24,000	\$ 72,000	\$ 46,410	\$ 139,230
2.1a	Capacitor Bank Foundations	0	EA.	\$ 56,025			\$ 72,000	\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA.	\$ 52,290		, ,		\$ 108,290	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA.	\$ 52,290		, ,	\$ 224,000	\$ 108,290	
2.1e	Switch Stand Foundations	36	EA.	\$ 8,964				\$ 17,928	
2.1f	Switch Stand Foundations	30	2711	φ 0,50	9 522,701	φ 0,50 .	\$ 522,701	Ų 17,520	V 0.5).00
2.1g	Bus Support 1ph Foundations (High Bus)	54	EA.	s -	Ś -	\$ -	\$ -	Ś -	\$ -
2.1h	Bus Support 1 Ph Foundations (Low Bus)	70	EA.	\$ 8,964	\$ 627,480	\$ 8,964	\$ 627,480	\$ 17,928	
2.1j	Instrument Transformer Stand Foundations	15	EA.	\$ 8,964				\$ 17,928	
2.1k	Arrester Stand Foundations	3	EA.	\$ 8,964			\$ 26,892	\$ 17,928	
2.1m	Wave Trap Stand Foundations	1	EA.	\$ 8,964	\$ 8,964	\$ 8,964	\$ 8,964	\$ 17,928	\$ 17,928
2.1n									
2.1p	Misc. Structure Foundations	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	345kV								
2.2a	Circuit Breaker Foundations	4	EA.	\$ 14,940				\$ 29,880	
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820		\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA.	\$ 26,145				\$ 52,290	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA.	\$ 26,145		\$ 26,145		\$ 52,290	
2.2e	Switch Stand Foundations	48	EA.	\$ 4,482	\$ 215,136	\$ 4,482	\$ 215,136	\$ 8,964	\$ 430,272

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2f	Station Service Transformer Stand Foundation	0	EA.	\$ 4,482	\$ -	\$ 4,482	\$ -	\$ 8,964	\$ -
2.2g	Bus Support 1ph Foundations (High Bus)	27	EA.	\$ -	·	\$ -	\$ -		\$ -
2.2h	Bus Support 1 Ph Foundations (Low Bus)	51	EA.	\$ 4,482	\$ 228,582		\$ 228,582	\$ 8,964	
2.2j	Instrument Transformer Stand Foundations	24	EA.	\$ 4,482			\$ 107,568		\$ 215,136
2.2k	Arrester Stand Foundations	6	EA.	\$ 4,482	\$ 26,892		\$ 26,892	\$ 8,964	
2.2m	Wave Trap Stand Foundations	2	EA.	\$ 4,482		\$ 4,482	\$ 8,964	\$ 8,964	\$ 17,928
2.2n	Misc. Structure Foundations	2	EA.	\$ 8,964	\$ 17,928	\$ 8,964	\$ 17,928	\$ 17,928	\$ 35,856
2.2p									
2.4a	Transformer Foundations 765-345kV Transformer Foundation w/ Oil Containment	7	EA.	ć 07.110	ć 670.770	ć 104.000	ć 739,000	ć 201.110	ć 1.407.770
2.4d	765-545KV Transformer Foundation W/ Oil Containment	/	EA.	\$ 97,110	\$ 679,770	\$ 104,000	\$ 728,000	\$ 201,110	\$ 1,407,770
2.4b	765-345kV Transformer Fire Wall	6	EA.	\$ 106,074	\$ 636,444	\$ 113,600	\$ 681,600	\$ 219,674	\$ 1,318,044
2.4c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.40				7	7	7	7	7	7
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 74,700	\$ 74,700	\$ 80,000	\$ 80,000	\$ 154,700	\$ 154,700
2.5b	Generator Foundation	1	EA	\$ 16,434	\$ 16,434		\$ 17,600	\$ 34,034	\$ 34,034
		_		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,		
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	12	EA	\$ 5,229	\$ 62,748	\$ 5,600	\$ 67,200	\$ 10,829	\$ 129,948
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	TATION FOUNDATIONS				\$ 3,740,976		\$ 3,864,890		\$ 7,605,866
3. SUBSTATIO	N STRUCTURES								
3.1	765kV								
3.1a	Substation A-Frame Structures - Stand alone	1	EA.	\$ 111,000	\$ 111,000	\$ 111,000	\$ 111,000	\$ 222,000	
3.1b	Substation A-Frame Structures - Shared Column	0	EA.	\$ 111,000	\$ -	\$ 111,000		\$ 222,000	•
3.1c	Switch Stands	6	EA.	\$ 22,200	\$ 133,200	\$ 22,200	\$ 133,200	\$ 44,400	\$ 266,400
3.1d									
3.1e	Bus Support 1ph (High Bus)	54	EA.	\$ 7,400	\$ 399,600	\$ 7,400	\$ 399,600	\$ 14,800	\$ 799,200
3.1f	Bus Support 1 Ph (low Bus)	70	EA.	\$ 5,550	\$ 388,500		\$ 388,500	\$ 11,100	
3.1g	Instrument Transformer Stand	15	EA.	\$ 3,700	\$ 55,500		\$ 55,500	\$ 7,400	
3.1h	Arrester Stand	3	EA.	\$ 3,700	. , , ,		\$ 11,100	\$ 7,400	
3.1j 3.1k	Wave Trap Stand	1 12	EA.	\$ 9,250 \$ 9,250	\$ 9,250 \$ 111,000	\$ 9,250 \$ 9,250	\$ 9,250 \$ 111,000	\$ 18,500 \$ 18,500	
3.1K	Lightning Mast	12	EA.	3 3,230	3 111,000	3 3,230	3 111,000	\$ 10,500	\$ 222,000
3.2	345kV								
3.2a	Substation A-Frame Structures - Stand alone	2	EA	\$ 37,000	\$ 74,000	\$ 37,000	\$ 74,000	\$ 74,000	\$ 148,000
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ 74,000	\$ 37,000	\$ -	\$ 74,000	
3.2c	Switch Stands	8	EA	\$ 14,800	\$ 118,400		\$ 118,400	\$ 29,600	
3.2d	Station Service Transformer Stand	1	EA	\$ 14,800	\$ 14,800			\$ 29,600	
3.2e	Bus Support 3ph	27	EA	\$ 5,550	\$ 149,850		\$ 149,850	\$ 11,100	
3.2f	Bus Support 1 Ph	51	EA	\$ 3,700	\$ 188,700			\$ 7,400	
3.2g	Instrument Transformer Stand	24	EA	\$ 1,850	\$ 44,400		\$ 44,400	\$ 3,700	
3.2h	Arrester Stand	6	EA	\$ 1,850	\$ 11,100	\$ 1,850	\$ 11,100	\$ 3,700	\$ 22,200
3.2j	Wave Trap Stand	2	EA	\$ 7,400	\$ 14,800	\$ 7,400	\$ 14,800	\$ 14,800	\$ 29,600
3.2k	Misc. Structures	6	EA	\$ 6,475	\$ 38,850	\$ 6,475	\$ 38,850	\$ 12,950	\$ 77,700
	TATION STRUCTURES				\$ 1,874,050		\$ 1,874,050		\$ 3,748,100
4. MAJOR EQU									
4.1	765kV								
	Circuit Breakers	3	EA.	\$ 900,000					
4.1b	Capacitor Banks	0	EA.		\$ -		\$ -		\$ -
4.1c	765-345kV Transformer (1ph)	7	EA.	\$ 1,266,667	\$ 8,866,667	\$ 250,000	\$ 1,750,000	\$ 1,516,667	\$ 10,616,667
4.1d	0.00111								
4.2	345kV		EA.	¢ 200.000	ć 000.000	ć 00.000	ć 220.000	ć 200.000	A 420 000
4.2a	Circuit Breakers Capacitor Banks	4 0	EA EA	\$ 200,000	\$ 800,000 \$ -			\$ 280,000 \$ 80,000	
/ 1h		. 01	FA		\$ -	.a 80.000	\$ -	3 XU U()()	S -
4.2b	Capacitor Banks			7	·	7 00,000		ψ 00,000	•
	R EQUIPMENT				\$ 12,366,667	7 33,000	\$ 2,400,000	y 00,000	\$ 14,766,667

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	765kV								
	Line Switches - 3ph w/ motor operator	1	EA	\$ 400,000	\$ 400,000		\$ 50,000	\$ 450,000	
	Disconnect Switches - 3ph w/ manual operator	6	EA	\$ 350,000	\$ 2,100,000		\$ 270,000	\$ 395,000	\$ 2,370,000
	VT'S	3	EA	\$ 13,000	\$ 39,000		\$ 48,000	\$ 29,000	\$ 87,000
	CT'S	3		\$ 13,000	\$ 39,000		\$ 36,000	\$ 25,000	
	CCVT'S	9	EA	\$ 12,000	\$ 108,000		\$ 108,000	\$ 24,000	
	Arresters	10	EA	\$ 15,000	\$ 150,000		\$ 120,000	\$ 27,000	
	Wave Traps	1	EA	\$ 15,000	\$ 15,000	\$ 12,000	\$ 12,000	\$ 27,000	\$ 27,000
5.1h 5.1j									
5.2	345kV								
	Line Switches - 3ph w/ motor operator	2	EA	\$ 40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$ 110,000
	Disconnect Switches - 3ph w/ manual operator	8	EA	\$ 35,000	\$ 280,000		\$ 140,000	\$ 52,500	\$ 420,000
	VT'S	6		\$ 25,000	\$ 150,000		\$ 72,000	\$ 37,000	
	CT'S	6	EA	\$ 13,000	\$ 78,000		\$ 48,000	\$ 21,000	
5.2e	CCVT'S	12	EA	\$ 13,000	\$ 156,000		\$ 96,000	\$ 21,000	
	Arresters	13	EA	\$ 6,500	\$ 84,500		\$ 19,500	\$ 8,000	\$ 104,000
	Wave Traps	2		\$ 13,000	\$ 26,000		\$ 16,000	\$ 21,000	\$ 42,000
	Station Service Transformers	2	EA	\$ 200,000	\$ 400,000		\$ 100,000	\$ 250,000	\$ 500,000
	EQUIPTMENT / MATERIALS DUSE / PANELS / GENERATOR				\$ 4,105,500		\$ 1,165,500		\$ 5,271,000
6.1	CONTROL HOUSE	1	EA	\$ 1,053,000	\$ 1,053,000	\$ 162,000	\$ 162,000	\$ 1,215,000	\$ 1,215,000
	Protection and Telecom Equipment Panels	29	EA	\$ 35,000	\$ 1,015,000		\$ 290,000	\$ 45,000	· · · ·
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,000
6.4	Control Cables	1	LS	\$ 546,700	\$ 546,700	\$ 546,700	\$ 546,700	\$ 1,093,400	\$ 1,093,400
6.5	SCADA and Communications	1	EA	\$ 35,000	\$ 35,000	\$ 12,500	\$ 12,500	\$ 47,500	\$ 47,500
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,000
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
	ROL HOUSE / PANELS / GENERATOR				\$ 3,114,700		\$ 1,556,200		\$ 4,670,900
7. MISC ITEMS					4				
7.1	Conduit & Cable Trench System	6,000	LF	\$ 185.00	\$ 1,110,000	\$ 231.27	\$ 1,387,620	\$ 416.27	\$ 2,497,620
7.2	Rigid Bus, Fittings & Insulators	6,500	LF	\$ 515.95	\$ 3,353,675	\$ 237.10	\$ 1,541,150	\$ 753.05	\$ 4,894,825
7.3	Strain Bus, Connectors & Insulators	2,000	LF	\$ 61.50	\$ 123,000	\$ 78.69	\$ 157,380	\$ 140.19	\$ 280,380
7.4	Grounding System	167,000	LF	\$ 6.93	\$ 1,157,310	\$ 32.58	\$ 5,440,860	\$ 39.51	\$ 6,598,170
7.5	Strain Bus Insulators	18	EA	\$ 4,000	\$ 72,000	\$ 2,100	\$ 37,800	\$ 6,100	\$ 109,800
	Control Conduits from Trench to Equipment	1	LS	\$ 125,000	\$ 125,000		\$ 125,000	\$ 250,000	
	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000	\$ 180,000		\$ 180,000	\$ 360,000	
7.8		<u> </u>		100,000	. 100,000	. 100,000	. 200,000	. 555,566	. 555,000
7.9									
7.10									
7.11									
7.12									
7.13									
7.13									
7. MISC ITEMS	345kV								
	Conduit & Cable Trench System	4,500	LF	\$ 125.07	\$ 562,815	\$ 170.00	\$ 765,000	\$ 295	\$ 1,327,815
7.15	Rigid Bus, Fittings & Insulators	4,300	LF	\$ 125.07	\$ 537,801		\$ 1,019,530	\$ 362	\$ 1,557,331
	Strain Bus, Connectors & Insulators	2,900	LF	\$ 61.50	\$ 178,350		\$ 228,201	\$ 140	, ,
/.1/	Salam Das, Connectors & Historica	2,900	LF	01.50	7 170,350	78.69	220,201	140	÷ 400,551

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
7.18	Grounding System	0	LF	\$ 6.93		\$ 32.58	\$ -	\$ 40	\$	-
7.19	Strain Bus Insulators - 345kV	36	EA	\$ 2,000	\$ 72,000	\$ 1,050	\$ 37,800	\$ 3,050	\$	109,800
7.20	Low Voltage AC Station Service	1	LS	\$ 50,000			\$ 75,000	\$ 125,000		125,000
7.21	SSVT Service	1	LS	\$ 50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.22	Control Conduits from Trench to Equipment	1	LS	\$ 125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.23	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.24										
7.25										
7.26										
7.27										
7.28										
7.29										
TOTAL - MISC	CITEMS				\$ 7,876,951		\$ 11,375,341		\$	19,252,292
R. Knick	erbocker Substation - Install				\$ 34,005,794		\$ 33,161,231		\$	67,167,025
8. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 671,670	\$ 671,670	\$ 671,670	\$	671,670
	Project Management, Material Handling & Amenities									
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 2,426,405	\$ 2,426,405	\$ 2,426,405	\$	2,426,405
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 671,670	\$ 671,670	\$ 671,670	Ś	671,670
8.4	Site Accommodation, Facilities, Storage	1	LS	Ś -	\$ -	\$ 671.670		\$ 671,670		671,670
	Engineering		-	,		. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. , , , , ,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	† ·	
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 5,373,362	\$ 5,373,362	\$ 5,373,362	\$	5,373,362
8.6	LiDAR	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
8.7	Geotech	4	EA	\$ -	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
8.8	Surveying/Staking	1	Site	\$ -	\$ -	\$ 470,169	\$ 470,169	\$ 470,169	\$	470,169
	Testing & Commissioning					,			T	
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 1,679,176	\$ 1,679,176	\$ 1,679,176	\$	1,679,176
	Permitting and Additional Costs								1	
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 201,501	\$ 201,501	\$ 201,501	\$	201,501
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$ -	\$ 600,000	\$ 600,000	\$ 600,000	\$	600,000
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.17	Carrying Charges	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 2,720,463	\$ 2,720,463	\$ -	š -	\$ 2,720,463	<u> </u>	2,720,463
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 67,167	\$ 67,167	\$ 67,167		67,167
	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 2,720,463		\$ 12.846.791	. 27,207	Ś	15,567,255

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S. Marcy Substation - Install

Estimate Revision: 5 Total: \$ 21,526,138

NAT & NYPA - T025 - (Segme	nt A,	+ 765kV)		
		Supply	Installation	Total
S. Marcy Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	134,000	\$ 991,250	\$ 1,125,250
2. SUBSTATION FOUNDATIONS	\$	2,312,712	\$ 2,405,568	\$ 4,718,280
3. SUBSTATION STRUCTURES	\$	1,283,900	\$ 1,283,900	\$ 2,567,800
4. MAJOR EQUIPTMENT	\$	900,000	\$ 110,000	\$ 1,010,000
5. SMALL EQUIPTMENT / MATERIALS	\$	1,361,000	\$ 392,000	\$ 1,753,000
6. CONTROL HOUSE / PANELS	\$	432,250	\$ 364,750	\$ 797,000
7. MISC ITEMS	\$	3,112,180	\$ 2,468,996	\$ 5,581,176
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	762,883	\$ 3,210,749	\$ 3,973,633
CONTRACTOR MARK-UP (OH&P)	\$		\$ -	\$ -
SUBTOTAL:	\$	10,298,925	\$ 11,227,213	\$ 21,526,138
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	10,298,925	\$ 11,227,213	\$ 21,526,138

ption	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
S. Marcy	Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	3.8	ACRES	\$ -	\$ -	\$ 203,000	\$ 761,250	\$ 203,000	\$ 761,250
1.2	Station stone within substation fence.	2,000	CY	\$ 27				\$ 102	
1.3	Substation Fence	800	LF	\$ 100	\$ 80,000	\$ 100	\$ 80,000	\$ 200	\$ 160,000
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ 134,000		\$ 991,250		\$ 1,125,250
	N FOUNDATIONS								
2.1	765kV						4	4	
	Circuit Breaker Foundations	1	EA.	\$ 22,410	\$ 22,410		\$ 24,000	\$ 46,410	
2.1b	Capacitor Bank Foundations	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	24	EA.	\$ 52,290	\$ 1,254,960		\$ 1,344,000	\$ 108,290 \$ 108.290	
	Caisson DE Foundations (for DE A frame str shared column)		EA.	\$ 52,290 \$ 8,964	\$ -	7 30,000	\$ -	7	
2.1e 2.1f	Switch Stand Foundations	18	EA.	\$ 8,964	\$ 161,352	\$ 8,964	\$ 161,352	\$ 17,928	\$ 322,704
			E A	ć		ć	ć	\$ -	*
2.1g	Bus Support 1ph Foundations (High Bus)	0 74	EA.	\$ - \$ 8.964	\$ -	\$ -	\$ -	т	\$ -
2.1h	Bus Support 1 Ph Foundations (Low Bus)		EA.	7	\$ 663,336		\$ 663,336	\$ 17,928 \$ 17.928	
2.1j 2.1k	Instrument Transformer Stand Foundations	15 3	EA. EA.	\$ 8,964 \$ 8,964	\$ 134,460 \$ 26,892		\$ 134,460 \$ 26,892	\$ 17,928 \$ 17,928	
2.1k 2.1m	Arrester Stand Foundations	2	EA.	\$ 8,964	\$ 26,892		\$ 26,892	\$ 17,928	
2.1m 2.1n	Wave Trap Stand Foundations	0	EA.	\$ 8,964	\$ 17,928	\$ 8,904	\$ 17,928	\$ 17,928	\$ 33,836
2.1n	Misc. Structure Foundations	0	EA.	, -	, -	, -	, -	, -	,
2.1p									
2.2	345kV								
2.2a	Circuit Breaker Foundations	0	EA.	\$ 14,940	\$ -	\$ 14,940	\$ -	\$ 29,880	\$ -
2.2b	Capacitor Bank Foundations	0	EA.	\$ 56,025		\$ 60,000		\$ 116,025	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA.	\$ 26,145		\$ 26,145		\$ 52,290	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA.	\$ 26,145		\$ 26,145		\$ 52,290	
2.2e	Switch Stand Foundations	0	EA.	\$ 4,482		\$ 4,482		\$ 8,964	
2.2f	Station Service Transformer Stand Foundation	0	EA.	\$ 4,482	Š -	\$ 4,482		\$ 8,964	
	Bus Support 1ph Foundations (High Bus)	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ 8,504	\$ -
2.2h	Bus Support 1 Ph Foundations (Low Bus)	0	EA.	\$ 4,482	\$ -		\$ -	\$ 8,964	т
2.211	I say support 1 : conductions (com bus)		LA.	1,402	1 *	1,402		3,304	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	0	EA.	\$ 4,482	\$ -	\$ 4,482	\$ -	\$ 8,964	\$ -
2.2k	Arrester Stand Foundations	0	EA.	\$ 4,482	\$ -	\$ 4,482	\$ -	\$ 8,964	\$ -
2.2m	Wave Trap Stand Foundations	0	EA.	\$ 4,482	\$ -	\$ 4,482	\$ -	\$ 8,964	\$ -
2.2n	Misc. Structure Foundations	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
	as with the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same o								
2.3a	115kV Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ - \$ -	\$ 69,615	
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600		\$ 34,034	
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	765-345kV Transformer Foundation w/ Oil Containment	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	765-345kV Transformer Fire Wall	0	EA.	\$ 106,074	\$ -	\$ 113,600	\$ -	\$ 219,674	\$ -
2.4c		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	6	EA	\$ 5,229	\$ 31,374	\$ 5,600	\$ 33,600	\$ 10,829	\$ 64,974
2.6b		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ 2,312,712		\$ 2,405,568		\$ 4,718,280
	N STRUCTURES								
3.1	765kV		F.4	444.000	d	444.000	4 555,000	4 222 222	4 222 222
3.1a 3.1b	Substation A-Frame Structures - Stand alone	6	EA. EA.	\$ 111,000 \$ 111,000	\$ 666,000 \$ -	\$ 111,000 \$ 111,000	\$ 666,000 \$ -	\$ 222,000 \$ 222,000	
3.1c	Substation A-Frame Structures - Shared Column Switch Stands	3	EA.	\$ 111,000	\$ 66,600		'	\$ 222,000	
3.1d	Switch Stanus	3	LA.	7 22,200	\$ 00,000	\$ 22,200	5 00,000	3 44,400	3 133,200
3.1e	Bus Support 1ph (High Bus)	0	EA.	\$ 7,400	\$ -	\$ 7,400	\$ -	\$ 14,800	\$ -
3.1f	Bus Support 1 Ph (low Bus)	74	EA.	\$ 5,550	\$ 410,700		\$ 410,700		\$ 821,400
3.1g	Instrument Transformer Stand	15	EA.	\$ 3,700	\$ 55,500		\$ 55,500	\$ 7,400	
3.1h	Arrester Stand	3	EA.	\$ 3,700	\$ 11,100	\$ 3,700	\$ 11,100	\$ 7,400	\$ 22,200
3.1j	Wave Trap Stand	2	EA.	\$ 9,250	\$ 18,500		\$ 18,500	\$ 18,500	\$ 37,000
3.1k	Lightning Mast	6	EA.	\$ 9,250	\$ 55,500	\$ 9,250	\$ 55,500	\$ 18,500	\$ 111,000
3.2	345kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	
3.2b	Substation A-Frame Structures - Shared Column	0	EA		\$ -	\$ 37,000		\$ 74,000	
3.2c	Switch Stands	0	EA	\$ 14,800				\$ 29,600	
3.2d	Station Service Transformer Stand	0	EA	\$ 14,800				\$ 29,600	
3.2e	Bus Support 3ph	0	EA	\$ 5,550		\$ 5,550		\$ 11,100	
3.2f	Bus Support 1 Ph Instrument Transformer Stand	0	EA EA	\$ 3,700 \$ 1,850				\$ 7,400 \$ 3,700	
3.2g 3.2h	Arrester Stand	0	EA EA	\$ 1,850	\$ -			\$ 3,700	
3.2n 3.2j	Wave Trap Stand	0	EA	\$ 1,850				\$ 3,700	
3.2k	Misc. Structures	0	EA	\$ 6,475		\$ 6,475		\$ 12,950	
				-,		.,		,	
3.3	115kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Substation A-Frame Structures - Stand alone	0		\$	18,500	т	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0		\$	18,500		\$ 18,500	\$ -		\$ -
	Switch Stands	0		\$	7,955		\$ 7,955		\$ 15,910	\$ -
	Fuse Stand	0		\$	7,955		\$ 7,955		\$ 15,910	\$ -
	Bus Support 3ph	0		\$	3,330		\$ 3,330		. ,	
	Bus Support 1 Ph	0		\$	1,850		\$ 1,850			\$ -
	Instrument Transformer Stand	0		\$	740		\$ 740		\$ 1,480	
	Arrester Stand	0		\$	7.10	т	\$ 740	\$ -		\$ -
	Wave Trap Stand	0		\$	3,700		\$ 3,700	\$ -		\$ -
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
TOTAL CURST	ATION STRUCTURES					4 202 000		4 1202 000		4 2557.000
4. MAJOR EQUI						\$ 1,283,900		\$ 1,283,900		\$ 2,567,800
	765kV		F.A.	ć	000 000	ć 000.000	ć 440.000	ć 440.000	ć 4.040.000	ć 4.040.000
	Circuit Breakers	1		\$,	\$ 900,000	\$ 110,000 \$ -			\$ 1,010,000
	Capacitor Banks	0		\$			\$ 250,000	\$ - \$ -	Ÿ	\$ - \$ -
	765-345kV Transformer (1ph)	U	EA.	,	-	\$ -	\$ 250,000	, -	\$ 250,000	\$ -
4.1d 4.2	345kV									
		0	EA	\$	200,000	\$ -	\$ 80,000	\$ -	\$ 280,000	\$ -
	Circuit Breakers Capacitor Banks	0		\$				\$ -	\$ 280,000 \$ 80,000	\$ - \$ -
4.20	Capacitor Banks	U	EA	13		, -	\$ 80,000	, -	\$ 80,000	-
4.3	115kV									
	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
	Capacitor Banks	0		\$			\$ 60,000	\$ -	\$ 60,000	\$ -
4.50	Capacitor Bariks	U	EA	1,3	-	, -	\$ 00,000	· -	\$ 00,000	-
TOTAL - MAJOR	REQUIPMENT					\$ 900,000		\$ 110,000		\$ 1,010,000
	PTMENT / MATERIALS					3 300,000		3 110,000		7 1,010,000
	765kV			_						
	Line Switches - 3ph w/ motor operator	1	EA	\$	400,000	\$ 400,000	\$ 50,000	\$ 50,000	\$ 450,000	\$ 450,000
	Disconnect Switches - 3ph w/ manual operator	2		\$			\$ 45,000	\$ 90,000		\$ 790,000
	VT'S	3	EA	\$	13,000					\$ 87,000
	CT'S	3		\$				\$ 36,000		\$ 75,000
	CCVT'S	9		\$	12,000		\$ 12,000	\$ 108,000		\$ 216,000
	Arresters	3	EA	\$	15,000	\$ 45,000	\$ 12,000	\$ 36,000	\$ 27,000	\$ 81,000
	Wave Traps	2	EA	\$	15,000	\$ 30,000	\$ 12,000	\$ 24,000	\$ 27,000	\$ 54,000
5.1h						,			,	,
5.1j										
5.2	345kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$	40,000	\$ -	\$ 15,000	\$ -	\$ 55,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	\$ -
5.2c	VT'S	0	EA	\$	-	\$ -	\$ 12,000	\$ -	\$ 12,000	\$ -
5.2d	CT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
	CCVT'S	0		\$	13,000		,	\$ -		\$ -
5.2f	Arresters	0	EA	\$	6,500	\$ -	\$ 1,500	\$ -	\$ 8,000	\$ -
	Wave Traps	0		\$,		\$ 8,000	\$ -	\$ 21,000	\$ -
	Station Service Transformers	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j										
	115kV									
	Line Switches - 3ph w/ motor operator	0		\$	33,000		\$ 15,000	\$ -		\$ -
	Disconnect Switches - 3ph w/ manual operator	0		\$	28,000		, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 45,500	\$ -
	VT'S	0		\$	13,000			\$ -		\$ -
	CT'S	0		\$	13,000		\$ 8,000		\$ 21,000	
	CCVT'S	0		\$	8,000		\$ 8,000		\$ 16,000	
	Arresters	0		\$	3,420		\$ 6,000		\$ 9,420	
	Wave Traps	0		\$				\$ -		\$ -
	Station Service Transformers	0		\$				\$ -		\$ -
5.3j	Fuses	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
	FOUNDTAINT (ASSESSMENT)			_		4 254		4 202		4 4 752 222
	EQUIPTMENT / MATERIALS					\$ 1,361,000		\$ 392,000		\$ 1,753,000
	OUSE / PANELS / GENERATOR		FA.	6		ć	ć	ć	ć	¢.
	CONTROL HOUSE	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply F	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
6.2	Protection and Telecom Equipment Panels	3	EA		000	\$ 105,000	\$ 12,500	\$ 37,500			142,500
6.3	125VDC Batteries	0			\rightarrow	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4	Control Cables	1	LS		250				\$ 654,500		654,500
6.5	SCADA and Communications	0	EA	·		\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0	EA		000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.7	DC Distribution System	0	EA		000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.8	Security	0	EA		500		\$ 7,500		\$ 15,000	\$	-
6.9	Fire Alarm	0	EA			\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.10	Generator	0	EA	\$ 100,	000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$	-
	DOLLIGHT ADARTIC ACTIVITATION				_						
	ROL HOUSE / PANELS / GENERATOR					\$ 432,250		\$ 364,750		\$	797,000
7. MISC ITEMS							4		4		
7.1	Conduit & Cable Trench System	1,400	LF	\$ 185	.00	\$ 259,000	\$ 231.27	\$ 323,778	\$ 416.27	Ş	582,778
7.2	Rigid Bus, Fittings & Insulators	4,500	LF	\$ 515	.95	\$ 2,321,775	\$ 237.10	\$ 1,066,950	\$ 753.05	\$	3,388,725
7.3	Strain Bus, Connectors & Insulators	3,750	LF	\$ 61	.50	\$ 230,625	\$ 78.69	\$ 295,088	\$ 140.19	\$	525,713
7.4	Grounding System	16,000	LF	\$ 6	5.93	\$ 110,880	\$ 32.58	\$ 521,280	\$ 39.51	\$	632,160
7.5	Strain Bus Insulators	0	EA	\$ 4,	000	\$ -	\$ 2,100	\$ -	\$ 6,100	\$	-
7.6	Control Conduits from Trench to Equipment	1	LS	\$ 81,	900	\$ 81,900	\$ 81,900	\$ 81,900	\$ 163,800	\$	163,800
7.7	Misc. Materials (Above and Below Ground)	1	LS	\$ 108,	000	\$ 108,000	\$ 180,000	\$ 180,000	\$ 288,000	\$	288,000
7.8											
7.9											
7.10											
7.11											
7.12											
7.13											
7.14					_						
7. MISC ITEMS											
7.15	Conduit & Cable Trench System	0	LF	\$ 125	.07	\$ -	\$ 170.00	\$ -	\$ 295	\$	-
7.16	Rigid Bus, Fittings & Insulators	0	LF	\$ 125	5.07	\$ -	\$ 237.10	\$ -	\$ 362	\$	-
7.17	Strain Bus, Connectors & Insulators	0	LF	\$ 61	50	\$ -	\$ 78.69	\$ -	\$ 140	\$	-
7.18	Grounding System	0	LF	\$ 6	5.93	\$ -	\$ 32.58	\$ -	\$ 40	\$	-
7.19	Strain Bus Insulators - 345kV	0	EA	\$ 2,	000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$	-
7.20	Low Voltage AC Station Service	0	LS	\$ 50,	000	\$ -	\$ 75,000	\$ -	\$ 125,000	\$	-
7.21	SSVT Service	0	LS	\$ 50,	000	\$ -	\$ 75,000	\$ -	\$ 125,000	\$	-
7.22	Control Cables	0	LS	\$ 531,	300	\$ -	\$ 531,300	\$ -	\$ 1,062,600	\$	-
7.23	Control Conduits from Trench to Equipment	0	LS	\$ 125,	000	\$ -	\$ 125,000	\$ -	\$ 250,000	\$	-
7.24	Misc. Materials (Above and Below Ground)	0	LS	\$ 180,	000	\$ -	\$ 180,000	\$ -	\$ 360,000	\$	-
7.25											
7.26											
7.27											
7.28		·									
7.29											
TOTAL - MISC	ITEMS					\$ 3,112,180		\$ 2,468,996		\$	5,581,176
	Substation - Install					\$ 9,536,042		\$ 8,016,464		\$	17,552,506
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization			ļ							
8.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 175,525	\$ 175,525	\$ 175,525	\$	175,525
8.2	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 634,083	\$ 634,083	\$ 634,083	\$	634,083
<u> </u>	,			-	\rightarrow		A .====				
8.3	Utility PM and Project Oversite	1	LS				\$ 175,525				175,525
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 175,525	\$ 175,525	\$ 175,525	Ş	175,525
	Engineering			ļ	\dashv			4			
8.5	Design Engineering	1		+ '		\$ -	\$ 1,404,200				1,404,200
8.6	LiDAR	-	LS	·				\$ -		\$	-
8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	Ş	14,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 122,868	\$ 122,868	\$ 122,868	\$ 122	2,868
	Testing & Commissioning										
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 438,813	\$ 438,813	\$ 438,813	\$ 438	8,813
	Permitting and Additional Costs										
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 52,658	\$ 52,658	\$ 52,658	\$ 52	2,658
8.13	Real Estate Costs (New)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	- 1
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	- 1
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 762	2,883	\$ 762,883	\$ -	\$ -	\$ 762,883	\$ 762	2,883
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 17,553	\$ 17,553	\$ 17,553	\$ 17	7,553
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:						\$ 762,883		\$ 3,210,749		\$ 3,973	3,633

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	NAT & NYPA - T025 - (Segment A, + 765kV)
	ESTIMATE ASSUMPTIONS & CLARIFICATIONS
1	Cost Estimate is based on 2017 rates.
2	Construction schedule is in accordance with proposed schedule - we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction
	schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
3	We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
4	All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
5	We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type.
6	Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough
	information to provide a quantified estimate for this item, allowance is included in the contingency monies.
7	Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal
	quotes.
8	Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
9	A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
	We have assumed that all project details provided are accurate unless noted otherwise.
	Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
12	A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
13	A contractor allowance of 3.132% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety
	inspector, compliance inspector, environmental inspector, and SWPP inspector.
14	An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
	A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
16	An allowance of 5% for transmission design and engineering has been included in the total section.
17	An allowance of 8% for substation design and engineering has been included in the total section.
18	An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
19	An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
	An allowance of 3.75% for substation testing and commissioning has been included in the total section.
	An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
	New York state sales tax of 8% is included in all material pricing.
23	An allowance of 1.5% for insurance is included in the DPS sheet.
24	The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.



		NY Power Authority and North American Transmission (T026)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$50,021
	1.2	Foundations	\$23,713
	1.3	Structures	\$60,645
	1.4	Conductor, Shiedwire and OPGW	\$35,492
	1.5	Insulators, Fitting and Hardwares	\$11,907
		Subtotal (1)	\$181,777
	2	Substations	
st	2.1	Rotterdam Substation	\$47,340
t Co	2.2	Edic Substation	\$2,153
Direct Cost	2.3	Princetown Substation	\$0
	2.4	New Scotland Substation	\$5,264
	2.5	Porter Substation	\$546
	2.6	Knickerbocker Substation	\$0
	2.7	Marcy Substation	\$0
	2.8	Substation Interconnections	\$8,301
		Subtotal (2)	\$63,603
		Total (1+2)	\$245,381
		Contractors Mark-up (15% of Total 1+2)	\$36,807
		Total Direct Cost (A)	\$282,188
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,454
	3.2	Project Management, Material Handling & Amenities	\$18,075
Cost	3.3	Engineering	\$16,556
Indirect Cost	3.4	Testing & Commissioning	\$1,498
Indir	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$19,749
	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,920
		Total Indirect Cost (3)	\$75,169
		Subtotal Project Cost (B=A+3) 2017 \$	\$357,357
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project (Marcy and Edic Terminals)	\$7,727
	4.2	NUF identified during Evaluation	\$0
		Subtotal NUF Cost (C)	\$7,727
		Total Project Cost (B+C) 2017 \$	\$365,084
		Total Project Cost 2018 \$	\$376,036

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Estimate Revision: 5

	NAT & NYPA - T026 - (Segment A, Base)) - Direct Costs		Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Edic to Princetown	\$	122,946,653
Direct Labor, Material & Equipment Costs	B. Transmission Line Princetown to Rotterdam	\$	20,488,282
Direct Labor, Material & Equipment Costs	C. Transmission Line Princetown to New Scotland	\$	38,342,499
Direct Labor, Material & Equipment Costs	D. Rotterdam Substation - Install	\$	43,728,474
Direct Labor, Material & Equipment Costs	E. Rotterdam Substation - Removal	\$	3,611,030
Direct Labor, Material & Equipment Costs	F. Edic Substation - Install	\$	2,117,185
Direct Labor, Material & Equipment Costs	G. Edic Substation - Removal	\$	35,750
Direct Labor, Material & Equipment Costs	H. New Scotland Substation - Install	\$	5,182,753
Direct Labor, Material & Equipment Costs	I. New Scotland Substation - Removal	\$	81,300
Direct Labor, Material & Equipment Costs	J. Porter Substation - Install	\$	71,912
Direct Labor, Material & Equipment Costs	K. Porter Substation - Removal	\$	474,313
Direct Labor, Material & Equipment Costs	L. Interconnection Edic Station	\$	1,784,075
Direct Labor, Material & Equipment Costs	M. Interconnection New Scotland Station	\$	2,594,271
Direct Labor, Material & Equipment Costs	N. Interconnection Rotterdam Station	\$	3,922,412
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	5,519,000
	SUBTOTAL	: \$	250,899,910
	CONTRACTOR MARK-UP (OH&P) \$	37,634,986
	CONTINGENCY ON ENTIRE PROJEC	Г \$	-
	TOTAL DIRECT:	\$	288,534,896

	NAT & NYPA - T026 - (Segment A, Base) - Indirect Costs	7	otal Each Segment
Indirect Costs	A. Transmission Line Edic to Princetown	\$	38,230,749
Indirect Costs	B. Transmission Line Princetown to Rotterdam	\$	4,591,422
Indirect Costs	C. Transmission Line Princetown to New Scotland	\$	9,378,594
Indirect Costs	D. Rotterdam Substation - Install	\$	10,957,370
Indirect Costs	E. Rotterdam Substation - Removal	\$	605,422
Indirect Costs	F. Edic Substation - Install	\$	527,893
Indirect Costs	G. Edic Substation - Removal	\$	5,958
Indirect Costs	H. New Scotland Substation - Install	\$	1,274,027
Indirect Costs	I. New Scotland Substation - Removal	\$	13,549
Indirect Costs	J. Porter Substation - Install	\$	15,559
Indirect Costs	K. Porter Substation - Removal	\$	79,048
Indirect Costs	L. Interconnection Edic Station	\$	347,969
Indirect Costs	M. Interconnection New Scotland Station	\$	521,432
Indirect Costs	N. Interconnection Rotterdam Station	\$	700,321
Indirect Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Indirect Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	1,380,000
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitagation)	\$	7,919,694
	TOTAL INDIRECT	: \$	76,549,008

TOTAL ESTIMATED COST: \$ 365,083,905

A. Transmission Line Edic to Princetown

Estimate	5	Total:	\$ 161,177,402

NAT & NYPA - T026 - (See	gment A	I, Base)		
		Supply	Installation	Total
A. Transmission Line Edic to Princetown				
1. CLEARING & ACCESS	\$	41,500	\$ 35,680,876	\$ 35,722,376
2. FOUNDATIONS	\$	3,098,282	\$ 10,723,946	\$ 13,822,229
3. STRUCTURES	\$	14,839,646	\$ 25,190,231	\$ 40,029,876
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	4,932,087	\$ 20,895,790	\$ 25,827,877
5. INSULATORS, FITTINGS, HARDWARE	\$	5,125,311	\$ 2,418,984	\$ 7,544,295
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	2,242,946	\$ 35,987,803	\$ 38,230,749
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	30,279,773	\$ 130,897,630	\$ 161,177,402
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	30,279,773	\$ 130,897,630	\$ 161,177,402

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	Descr	iption of	f Worl	c:
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ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Trans	mission Line Edic to Princetown								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	8.0	Acre	\$ -	\$ -	\$ 15,000	\$ 120,000	\$ 15,000	\$ 120,000
1.2	Clearing the ROW - Light (mowing)	194.0	Acre		\$ -	\$ 5,000	\$ 970,000	\$ 5,000	\$ 970,000
1.3	Access Road	70,540.8	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	352,704.0	LF	\$ -	\$ -		\$ 1,410,816		\$ 1,410,816
1.5	Matting - Access and ROW	282,163.2	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	25,200.0	LF	\$ -	\$ -	\$ 70		\$ 70	
1.7	Snow Removal	66.8	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	66.8	Mile	\$ -	\$ -	\$ 10,000		\$ 10,000	
1.9	Work Pads	1,680,000.0	SF	\$ -	\$ -		\$ 5,913,600	\$ 4	. , ,
1.10	Restoration for Work Pad areas	336,000.0	SF EA	\$ - \$ -	\$ -	\$ 0.15 \$ 20,035		\$ 0 \$ 20,035	1,
1.11	Temporary Access Bridge Air Bridge	-	EA EA	\$ -	\$ - \$ -	\$ 20,035		\$ 20,035	,
1.12	Stabilized Construction Entrance	50	EA EA	\$ -	\$ -	\$ 4,580		\$ 4,580	
1.13	Maintenance and Protection of Traffic on Public Roads	100	EA	\$ -	\$ -	\$ 4,130		\$ 4,130	
1.15	Culverts / Misc. Access	10	EA	\$ 750	·			\$ 2,000	
1.16	Gates	17	EA	\$ 2,000				\$ 4,500	
1.17	Concrete Washout Station	50	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
	RING & ACCESS:			,	\$ 41,500	,,,,,,	\$ 35,680,876	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$ 35,722,376
2. FOUNDATIO	DNS								
2.1	Direct Embed Foundations - 4' x 16'	416	EA	\$ 941	\$ 391,345	\$ 7,398	\$ 3,077,513	\$ 8,339	\$ 3,468,858
2.2	Direct Embed Foundations - 4' x 17'	2	EA	\$ 995	\$ 1,990	\$ 7,833	\$ 15,666	\$ 8,828	\$ 17,656
2.3	Direct Embed Foundations - 4' x 19'	52	EA	\$ 1,104	\$ 57,404			\$ 9,807	\$ 509,979
2.4	Direct Embed Foundations - 4' x 21'	4	EA	\$ 1,213		\$ 9,574		\$ 10,786	
2.5	Direct Embed Foundations - 4' x 23'	16	EA	\$ 1,322	 	\$ 10,444	\$ 167,105	\$ 11,766	\$ 188,249
2.6	Direct Embed Foundations - 4' x 25'	4	EA	\$ 1,430	\$ 5,721	\$ 11,314		\$ 12,745	\$ 50,979
2.7	Direct Embed Foundations - 6' x 18'	6	EA	\$ 1,857				\$ 20,461	
2.8	Direct Embed Foundations - 6' x 19'	6	EA	\$ 1,952	\$ 11,711	\$ 19,583	\$ 117,496	\$ 21,534	\$ 129,207
2.9	Direct Embed Foundations - 6' x 20'	14	EA	\$ 2,046	-			\$ 22,608	
2.10	Direct Embed Foundations - 6' x 21'	15	EA	\$ 2,141	\$ 32,110			\$ 23,681	· · · · · · · · · · · · · · · · · · ·
2.11	Direct Embed Foundations - 6' x 22'	7	EA	\$ 2,235	<u> </u>	\$ 22,520	\$ 157,640	\$ 24,755	
2.12	Direct Embed Foundations - 6' x 25'	6	EA	\$ 2,518				\$ 27,976	
2.13	Direct Embed Foundations - 6' x 26'	1	EA	\$ 2,613	<u> </u>			\$ 29,049	
		3	EA EA	\$ 2,707	-	\$ 26,437	\$ 26,437	\$ 29,049	\$ 29,049
2.14	Direct Embed Foundations - 6' x 28'			- ' '					
2.15	Direct Embed Foundations - 6' x 29'	3	EA	\$ 2,896		\$ 29,374		\$ 32,270	\$ 96,809
2.16	Direct Embed Foundations - 6' x 33'	3	EA	\$ 3,273	-			\$ 36,564	\$ 109,691
2.17	Direct Embed Foundations - 7' x 27'	2	EA	\$ 3,337				\$ 40,652	
2.18	Direct Embed Foundations - 7' x 28'	1	EA	\$ 3,452	 			\$ 42,101	\$ 42,101
2.19	Direct Embed Foundations - 7' x 49'	1	EA	\$ 5,880	\$ 5,880	\$ 66,635	\$ 66,635	\$ 72,515	
									Page 3 of 60

223 Distallary 7-24 PT	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 District 1.5 Dist	2.20	Direct Embed Foundations - 7' x 61'	1	EA	\$ 7,267	\$ 7,267	\$ 82,628	\$ 82,628	\$ 89,894	\$ 89,894
2-23	2.21	Drilled Pier - 6' x 20'	54	EA	\$ 18,064	\$ 975,459	\$ 18,261	\$ 986,079	\$ 36,325	\$ 1,961,539
2.23	2.22	Drilled Pier - 7' x 19'	15	EA	\$ 23,416	\$ 351,246	\$ 23,671	\$ 355,070	\$ 47,088	\$ 706,315
2.28	2.23	Drilled Pier - 7' x 21'	12	EA	\$ 25,758	\$ 309,096	\$ 26,038	\$ 312,461	\$ 51,796	\$ 621,558
228 Orlfedere - F. a. S. 2. 2. 2. 2. 2. 2. 2.	2.24	Drilled Pier - 7' x 22'	6	EA		\$ 161,573	\$ 27,222	\$ 163,332	\$ 54,151	\$ 324,905
2.72 Outself Nor " # STY	2.26	Drilled Pier - 7' x 23'	3	EA	\$ 28,100	\$ 84,299	\$ 28,406	\$ 85,217	\$ 56,505	\$ 169,516
2.20 Orline fire ** x T	2.27	Drilled Pier - 7' x 33'	6	EA	\$ 39,808	\$ 238,847	\$ 40,241	\$ 241,447	\$ 80,049	\$ 480,295
2.0 Didded fine: "#. 197	2.28	Drilled Pier - 7' x 42'	3	EA	\$ 50,345	\$ 151,036	\$ 50,893	\$ 152,680	\$ 101,239	\$ 303,716
2.00 Didled New - 9-127 2.11 Rock Incordance Address 1,342	2.29	Drilled Pier - 8' x 27'	2	EA	\$ 42,819	\$ 85,637	\$ 57,340	\$ 114,680	\$ 100,158	\$ 200,317
2.51 Rock Priciary William Assistant (0**) - 115 1.542 CY 5 - 5 - 5 2,000 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000	2.30	Drilled Pier - 8' x 29'	2	EA	\$ 45,877	\$ 91,754	\$ 61,436	\$ 122,871	\$ 107,313	\$ 214,625
STREAM	2.31	Rock Excavation Adder	1,342	CY	\$ -	\$ -	\$ 2,000	\$ 2,684,000	\$ 2,000	\$ 2,684,000
1	TOTAL - FOUN	DATIONS:				\$ 3,098,282		\$ 10,723,946		\$ 13,822,229
1.00T 365W VERTICAL MODES (1973) - 1207	3. STRUCTURE	S								
3.1 SCRT SERV VERTICAL MARKER (19-47) - 1157 10 10 Structure 5 SA275 5 174,770 5 34,954 5 194,862 5 92,220 5 5 5 5 5 5 5 5 5		1-CKT 345KV VERTICAL TANGENT (0°-1°) - 115'	7	Structure			\$ 30,014	\$ 210,101	\$ 80,038	\$ 560,269
1. CAT JASSOV VERITICAL RANGE (17-13)- 1357 10 57 Productive 5 60,888 5 80,503 5 50,503 5 50,503 5 5 50,503 5 5 50,503 5 5 5 5 5 5 5 5 5	3.2	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 120'	4	Structure	\$ 52,207	\$ 208,828	\$ 31,324	\$ 125,297	\$ 83,531	\$ 334,125
1	3.3	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 130'	3	Structure	\$ 58,257	\$ 174,770	\$ 34,954	\$ 104,862	\$ 93,210	\$ 279,631
2.6CT SHOW VERTICAL SMALL ANGELE (1-157)-1397 3 Structure 5 72,039 5 72,039 5 123,247 5 115,020 5 133,147 5 115,020 5 3.7	3.4	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 135'	10	Structure	\$ 60,884	\$ 608,835	\$ 36,530	\$ 365,301	\$ 97,414	\$ 974,136
3	3.5	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 145'	1	Structure	\$ 64,473	\$ 64,473	\$ 38,684	\$ 38,684	\$ 103,156	\$ 103,156
3.1 COT 3650 VERTICAL MOUL ANGLE (12-15)-132	3.6	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 115'	1	Structure	\$ 72,039	\$ 72,039	\$ 43,223	\$ 43,223	\$ 115,262	\$ 115,262
3.9 SCG 368/SVERTICAL MEDIUM ANGIE DEADERO (15*07)-157 1 STRUCTURE \$ 116.328 \$ 09.797 \$ 09.797 \$ 186.125 \$ 20.707 \$ 1 18.125 \$ 20.707 \$ 1 18.125 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$ 20.707 \$	3.7	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 130'	3	Structure	\$ 85,082	\$ 255,245	\$ 51,049	\$ 153,147	\$ 136,130	\$ 408,391
3.10 S.CTT ASSEV VERTICAL MEDIUM ANGEL DEADEN (15*-607) - 120* 1 Structure 5 20,833 5 20,033 5 124,820 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 5 312,823 312,823 312,823 312,823 312,823 312,823 312,823 312,823 312,823 312,823 312,823 312,823 312,823 312,823	3.8	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 135'	1	Structure	\$ 92,278	\$ 92,278	\$ 55,367	\$ 55,367	\$ 147,645	\$ 147,645
3.11 Cott 3450V MERICAL MEDIUM ANGEL DEADEN (15*-607) -1507 1 Structure 5 28,835 5 28,835 5 28,835 5 14,845 5 33,252 5 33,151 5 33,152 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 5 33,153 3	3.9	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$ 116,328	\$ 116,328	\$ 69,797	\$ 69,797	\$ 186,125	\$ 186,125
3.12 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.13 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.14 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.15 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.16 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.16 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.16 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.16 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.16 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.16 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.17 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.18 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.19 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.10 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.11 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.12 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.13 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.14 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.15 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.16 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.17 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.18 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.19 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.10 1.CCT 345FV FFRAME TANGENT (0°1-1)** 3.10 1.CCT 345FV FFRAME TANGENT (0°1-1)** 4 50 50 50 50 50 50 50	3.10	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 120'	1	Structure	\$ 127,558	\$ 127,558	\$ 76,535	\$ 76,535	\$ 204,092	\$ 204,092
3.13 1-CRT 355VV-HFRAME TANGENT (0°-17) -80° 2 Structure 5 24.776 5 14.685 5 30.911 5	3.11	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 150'	1	Structure	\$ 208,033	\$ 208,033	\$ 124,820	\$ 124,820	\$ 332,852	\$ 332,852
3.14 LCXT 345KV H-RAME TANGENT (0'-1') - 80' 169 Structure \$ 2,526 \$ 4,989,894 \$ 17,716 \$ 2,993,936 \$ 47,242 \$ 1,315 LCXT 345KV H-RAME TANGENT (0'-1') - 89' 36 Structure \$ 32,708 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1,177.488 \$ 1	3.12	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 160'	1	Structure	\$ 238,595	\$ 238,595	\$ 143,157	\$ 143,157	\$ 381,751	\$ 381,751
3.15 1-CKT 345KV H-FRAME TANGENT (0'-1')-84' 169 Structure 5 22,708 5 4,989,894 17,716 5 2,993,936 5 47,242 5 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-15 1-	3.13	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 75'	1	Structure	\$ 24,476	\$ 24,476	\$ 14,685	\$ 14,685	\$ 39,161	\$ 39,161
3.16 LCKT 345KV H-FRAME TANGENT (0°-1')-89" 23 Structure S 32,00 S 1.17,488 S 1.65.25 S 706,493 S S.2.333 S 3.17 LCKT 345KV H-FRAME TANGENT (0°-1')-98" 23 Structure S 34,540 S 794,409 S 20,724 S 47,65.65 S 5.26.3 S 3.18 LCKT 345KV H-FRAME TANGENT (0°-1')-108" 4 Structure S 37,500 S 374,999 S 22,500 S 224,997 S 59,999 S 3.19 LCKT 345KV H-FRAME TANGENT (0°-1')-102" 4 Structure S 43,501 S 175,602 S 26,340 S 105,361 S 70,241 S 52,233 S 105,361 S 70,241 S 52,233 S 105,361 S 70,241 S 52,233 S S 105,361 S 70,241 S S 52,233 S S S S S S S S S	3.14	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 80'	2	Structure	\$ 25,826	\$ 51,652	\$ 15,496	\$ 30,991	\$ 41,322	\$ 82,643
3.17 1-KXT 36KV H-FRAME TANGENT (0'-1') -98' 10 Structure S 37,500 \$ 374,995 \$ 22,500 \$ 224,997 \$ 59,999 \$ \$ 3.18 1-KXT 345KV H-FRAME TANGENT (0'-1') -102' 4 Structure \$ 37,500 \$ 374,995 \$ 22,500 \$ 224,997 \$ 59,999 \$ \$ 3.19 1-KXT 345KV H-FRAME TANGENT (0'-1') -102' 4 Structure \$ 43,901 \$ 175,602 \$ 2,640 \$ 103,361 \$ 70,241 \$ 3.20 1-KXT 345KV H-FRAME TANGENT (0'-1') -102' 2 Structure \$ 45,936 \$ 91,871 \$ 27,561 \$ 55,123 \$ 73,497 \$ \$ 3.21 1-KXT 345KV H-FRAME SMALL ANGE (1'-15') -80' 2 Structure \$ 55,241 \$ 110,482 \$ 33,145 \$ 60,289 \$ 8,883 \$ 3,221 1-KXT 345KV H-FRAME SMALL ANGE (1'-15') -80' 2 Structure \$ 55,241 \$ 110,482 \$ 33,145 \$ 60,289 \$ 8,883 \$ 3,221 1-KXT 345KV H-FRAME SMALL ANGE (1'-15') -90' 2 Structure \$ 57,813 \$ 1,098,438 \$ 34,688 \$ 659,063 \$ 92,500 \$ \$ 32,20 \$ \$ 32,20 1-KXT 345KV H-FRAME SMALL ANGE (1'-15') -90' 2 Structure \$ 61,050 \$ 122,100 \$ 3,0072 \$ 73,640 \$ 97,680 \$ \$ 3,240 1-KXT 345KV H-FRAME SMALL ANGE (1'-15') -90' 2 Structure \$ 65,120 \$ 130,020 \$ 3,9072 \$ 78,144 \$ 104,192 \$ 3,345 \$ 1.KXT 345KV H-FRAME SMALL ANGE (1'-15') -100' 1 Structure \$ 68,635 \$ 68,635 \$ 41,181 \$ 10,93,16 \$ 3,261 \$ 1.KXT 345KV H-FRAME SMALL ANGE (1'-15') -100' 1 Structure \$ 68,635 \$ 68,635 \$ 41,181 \$ 10,93,16 \$ 3,261 \$ 1.KXT 345KV H-FRAME SMALL ANGE (1'-15') -100' 1 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 11,659 \$ 3,20 \$ 1.KXT 345KV H-FRAME SMALL ANGE (1'-15') -100' 1 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 11,659 \$ 3,20 \$ 1.KXT 345KV H-FRAME SMALL ANGE (1'-15') -100' 1 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 11,659 \$ \$ 3,20 \$ 1.KXT 345KV H-FRAME SMALL ANGE (1'-15') -100' 1 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 11,659 \$ \$ 3,20 \$ 1.KXT 345KV H-FRAME SMALL ANGE (1'-15') -100' 1 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 11,659 \$ \$ 3,20 \$ 1,20 \$ 3,20 \$ 3,2	3.15	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 84'	169	Structure	\$ 29,526	\$ 4,989,894	\$ 17,716	\$ 2,993,936	\$ 47,242	\$ 7,983,830
3.18 1-CKT 345KV H-FRAME TANGENT (0"-1") - 10?	3.16	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 89'	36	Structure	\$ 32,708	\$ 1,177,488	\$ 19,625	\$ 706,493	\$ 52,333	\$ 1,883,981
3.19 1-CKT 345KV H-FRAME TANGENT (0°-1") - 102"	3.17	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 93'	23	Structure	\$ 34,540	\$ 794,409	\$ 20,724	\$ 476,645	\$ 55,263	\$ 1,271,054
3.20 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -80* 2 Structure S 5,241 S 110,482 S 33,145 S 66,289 S 88,386 S 3. 3.21 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -80* 2 Structure S 5,241 S 110,482 S 33,145 S 66,289 S 88,386 S 3. 3.22 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -90* 2 Structure S 61,050 S 122,100 S 36,680 S 73,260 S 97,680 S 3. 3.24 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -90* 2 Structure S 61,050 S 122,100 S 36,680 S 73,260 S 97,680 S 3. 3.25 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -90* 2 Structure S 61,050 S 122,100 S 36,680 S 73,260 S 97,680 S 3. 3.26 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -90* 2 Structure S 65,120 S 130,240 S 39,072 S 78,144 S 104,192 S 3. 3.25 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -100* 1 Structure S 66,555 S 66,555 S 41,181 S 109,816 S 3. 3.26 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -100* 1 Structure S 66,555 S 68,555 S 41,181 S 109,816 S 3. 3.27 1-CKT 345KV H-FRAME SMALL ANGIE (1*15*) -105* 1 Structure S 72,872 S 72,872 S 43,723 S 43,723 S 116,594 S 3. 3.28 1-CKT 345KV 3-POLE TANGENT DEADEND (0*5*) -80* 3 Structure S 69,079 S 207,237 S 41,447 S 124,342 S 110,526 S 3. 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0*5*) -80* 4 Structure S 75,739 S 302,956 S 45,443 S 181,774 S 121,182 S 3. 3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (0*5*) -80* 4 Structure S 75,739 S 302,956 S 45,443 S 181,774 S 121,182 S 3. 3.31 1-CKT 345KV 3-POLE TANGENT DEADEND (0*5*) -80* 4 Structure S 75,739 S 302,956 S 45,443 S 181,774 S 121,182 S 3. 3.31 1-CKT 345KV 3-POLE MEDIUM ANGIE DEADEND (15*60*) -90* 4 Structure S 105,802 S 634,809 S 58,442 S 58,442 S 155,844 S 3. 3.32 1-CKT 345KV 3-POLE MEDIUM ANGIE DEADEND (15*60*) -90* 1 Structure S 105,802 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S 634,809 S	3.18	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 98'	10	Structure	\$ 37,500	\$ 374,995	\$ 22,500	\$ 224,997	\$ 59,999	\$ 599,992
3.21 1_CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 80' 2 Structure \$ 55,241 \$ 110,482 \$ 33,145 \$ 66,289 \$ 88,386 \$ 3.22 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 80' 9 2 Tructure \$ 57,813 \$ 1,088,438 \$ 34,688 \$ 659,063 \$ 92,500 \$ 3.23 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 90' 9 2 Structure \$ 61,050 \$ 122,000 \$ 36,030 \$ 73,260 \$ 97,680 \$ 3.24 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 90' 9 2 Structure \$ 61,050 \$ 122,000 \$ 36,030 \$ 73,260 \$ 97,680 \$ 3.24 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 90' 9 2 Structure \$ 65,020 \$ 130,240 \$ 39,072 \$ 78,144 \$ 104,192 \$ 3.25 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 100' 1 Structure \$ 68,635 \$ 68,635 \$ 41,181 \$ 109,816 \$ 3.26 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 100' 1 Structure \$ 72,272 \$ 72,872 \$ 43,723 \$ 43,723 \$ 43,723 \$ 143,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723 \$ 43,723	3.19	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 102'	4	Structure	\$ 43,901	\$ 175,602	\$ 26,340	\$ 105,361	\$ 70,241	\$ 280,963
3.22 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 85' 2 Structure \$ 57,813 \$ 1,098,438 \$ 34,688 \$ 659,063 \$ 92,500 \$ 3.23 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 90' 2 Structure \$ 61,500 \$ 122,100 \$ 36,630 \$ 73,260 \$ 97,680 \$ 9 \$ 3.24 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 100' 1 Structure \$ 65,120 \$ 130,240 \$ 39,072 \$ 78,144 \$ 104,192 \$ 3.25 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 100' 1 Structure \$ 68,635 \$ 68,635 \$ 68,635 \$ 41,181 \$ 41,181 \$ 109,816 \$ 3.26 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') - 100' 1 Structure \$ 72,872 \$ 72,872 \$ 73,873 \$ 116,594 \$ 3.25 1-CKT 345KV 3-POLE TANGENT DEADEND (0'-5') - 75' 2 STructure \$ 61,513 \$ 123,025 \$ 36,908 \$ 73,815 \$ 98,420 \$ 3.28 1-CKT 345KV 3-POLE TANGENT DEADEND (0'-5') - 80' 3 STructure \$ 69,079 \$ 207,237 \$ 41,447 \$ 124,342 \$ 110,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0'-5') - 80' 3 STructure \$ 77,739 \$ 302,956 \$ 45,443 \$ 181,774 \$ 124,182 \$ 100,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0'-5') - 80' 4 STructure \$ 77,739 \$ 302,956 \$ 45,443 \$ 181,774 \$ 124,182 \$ 100,526 \$ 3.31 1-CKT 345KV 3-POLE TANGENT DEADEND (0'-5') - 80' 4 STructure \$ 81,493 \$ 325,570 \$ 48,896 \$ 195,582 \$ 130,388 \$ 3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (0'-5') - 80' 4 STructure \$ 97,403 \$ 97,403 \$ 97,403 \$ 98,402 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540 \$ 100,540	3.20	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 107'	2	Structure	\$ 45,936	\$ 91,871	\$ 27,561	\$ 55,123	\$ 73,497	\$ 146,994
3.23 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') -90' 2 Structure \$ 61,050 \$ 122,100 \$ 36,630 \$ 73,260 \$ 97,680 \$ 3.24 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') -90' 2 Structure \$ 65,120 \$ 130,240 \$ 39,072 \$ 78,144 \$ 104,192 \$ 3.25 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') -100' 1 Structure \$ 65,120 \$ 130,240 \$ 39,072 \$ 78,144 \$ 104,192 \$ 3.25 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') -100' 1 Structure \$ 65,120 \$ 130,240 \$ 39,072 \$ 78,144 \$ 104,192 \$ 3.25 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') -100' 1 Structure \$ 68,635 \$ 68,635 \$ 41,181 \$ 109,816 \$ 3.26 1-CKT 345KV H-FRAME SMALL ANGLE (1'-15') -105' 1 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 43,723 \$ 116,594 \$ 3.27 1-CKT 345KV 3-FOLE TANGENT DEADEND (0'-5') -75' 2 Structure \$ 61,513 \$ 123,025 \$ 36,908 \$ 73,815 \$ 98,420 \$ \$ 3.28 1-CKT 345KV 3-POLE TANGENT DEADEND (0'-5') -85' 4 Structure \$ 69,079 \$ 207,237 \$ 41,447 \$ 124,342 \$ 110,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0'-5') -85' 4 Structure \$ 75,739 \$ 302,956 \$ 45,443 \$ 181,774 \$ 121,182 \$ 3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (0'-5') -90' 4 Structure \$ 81,493 \$ 325,970 \$ 48,896 \$ 195,582 \$ 130,388 \$ 3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15'-60') -80' 1 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,822 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15'-60') -85' 1 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,822 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15'-60') -95' 1 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15'-60') -95' 1 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15'-60') -95' 1 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15'-60') -95' 1 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15'-60') -95' 1 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15'-60') -95' 1	3.21	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 80'	2	Structure	\$ 55,241	\$ 110,482	\$ 33,145	\$ 66,289	\$ 88,386	\$ 176,771
3.24 1-CKT 345KV H-FRAME SMALL ANGLE (1*-15") - 95" 2 Structure \$ 65,120 \$ 130,240 \$ 39,072 \$ 78,144 \$ 104,192 \$ 3.25	3.22	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 85'	19	Structure	\$ 57,813	\$ 1,098,438	\$ 34,688	\$ 659,063	\$ 92,500	\$ 1,757,500
3.24 1-CKT 345KV H-FRAME SMALL ANGLE (1*-15*) - 95* 2 Structure \$ 65,120 \$ 130,240 \$ 39,072 \$ 78,144 \$ 104,192 \$ 3.25 1-CKT 345KV H-FRAME SMALL ANGLE (1*-15*) - 100* 1 Structure \$ 68,635 \$ 68,635 \$ 41,181 \$ 41,181 \$ 109,816 \$ 3.26 1-CKT 345KV H-FRAME SMALL ANGLE (1*-15*) - 105* 1 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 43,723 \$ 116,594 \$ 3.27 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 57* 2 Structure \$ 61,513 \$ 123,025 \$ 36,908 \$ 73,815 \$ 98,420 \$ 3.28 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 80* 3 Structure \$ 69,079 \$ 207,237 \$ 41,447 \$ 124,342 \$ 110,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 80* 3 Structure \$ 69,079 \$ 207,237 \$ 41,447 \$ 124,342 \$ 110,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 80* 4 Structure \$ 75,739 \$ 302,956 \$ 45,443 \$ 181,774 \$ 121,182 \$ 3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 80* 4 Structure \$ 81,493 \$ 325,970 \$ 48,896 \$ 195,582 \$ 130,388 \$ 3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 80* 1 Structure \$ 97,403 \$ 97,403 \$ 58,442 \$ 58,442 \$ 155,844 \$ 3.32 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 80* 6 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,282 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,282 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,5518 \$ 70,5518 \$ 70,5518 \$ 70,552 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 129,408 \$ 178,026 \$ 106,815 \$ 70,552 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 129,408 \$ 178,026 \$ 106,815 \$ 70,552 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 129,408 \$ 178,026 \$ 106,815 \$ 70,552 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 178,026 \$ 178,026 \$ 106,815 \$ 70,552 \$ 284,841 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 178,0	3.23	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 90'	2	Structure	\$ 61,050	\$ 122,100	\$ 36,630	\$ 73,260	\$ 97,680	\$ 195,360
3.26 1-CKT 345KV H-FRAME SMALL ANGLE (1*-15*) - 105* 1 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 43,723 \$ 116,594 \$ 3.27 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 80* 2 Structure \$ 61,513 \$ 123,025 \$ 36,908 \$ 73,815 \$ 98,420 \$ 3.28 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 80* 3 Structure \$ 69,079 \$ 207,237 \$ 41,447 \$ 124,342 \$ 110,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 80* 4 Structure \$ 75,739 \$ 302,956 \$ 45,443 \$ 181,774 \$ 121,182 \$ 3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (0*-5*) - 90* 4 Structure \$ 81,493 \$ 325,970 \$ 48,896 \$ 195,582 \$ 130,388 \$ 3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 80* 1 Structure \$ 97,403 \$ 97,403 \$ 58,442 \$ 58,442 \$ 155,844 \$ 3.32 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,282 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,552 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,552 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 703,518 \$ 70,552 \$ 422,111 \$ 187,605 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15*-60*) - 90* 6 Structure \$ 117,253 \$ 70,500 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,645 \$ 77,64	3.24		2	Structure	\$ 65,120	\$ 130,240	\$ 39,072	\$ 78,144	\$ 104,192	\$ 208,384
3.26 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 50° 2 Structure \$ 72,872 \$ 72,872 \$ 43,723 \$ 43,723 \$ 116,594 \$ 3.27 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80° 3 Structure \$ 61,513 \$ 123,025 \$ 36,908 \$ 73,815 \$ 98,420 \$ 3.28 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80° 3 Structure \$ 69,079 \$ 207,237 \$ 41,447 \$ 124,342 \$ 110,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80° 4 Structure \$ 75,739 \$ 302,956 \$ 45,443 \$ 181,774 \$ 121,182 \$ 3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80° 4 Structure \$ 81,493 \$ 325,970 \$ 48,896 \$ 195,582 \$ 130,388 \$ 3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80° 1 Structure \$ 97,403 \$ 97,403 \$ 98,442 \$ 58,442 \$ 155,844 \$ 3.32 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80° 6 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,282 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 Structure \$ 117,253 \$ 703,518 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 STructure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 STructure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 STructure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 STructure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 2		1 1						·		
3.27 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 75° 2 Structure \$ 61,513 \$ 123,025 \$ 36,908 \$ 73,815 \$ 98,420 \$ 3.28 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80° 3 Structure \$ 69,079 \$ 207,237 \$ 41,447 \$ 124,342 \$ 110,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 85° 4 Structure \$ 75,739 \$ 302,956 \$ 45,443 \$ 181,774 \$ 124,342 \$ 110,526 \$ 3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80° 4 Structure \$ 81,493 \$ 325,970 \$ 48,896 \$ 195,582 \$ 130,388 \$ 3.31 1-CKT 345KV 3-POLE TANGENT DEADEND (15°-60°) - 80° 1 Structure \$ 97,403 \$ 97,403 \$ 58,442 \$ 58,442 \$ 155,844 \$ 3.32 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 85° 6 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,282 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90° 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95° 1 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95° 1 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115° 1 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115° 1 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115° 1 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115° 1 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115° 1 Structure \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 129,408 \$ 1	3.26	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 105'	1	Structure	\$ 72,872	\$ 72,872	\$ 43,723	\$ 43,723	\$ 116,594	\$ 116,594
3.28 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80° 3 Structure \$ 69,079 \$ 207,237 \$ 41,447 \$ 124,342 \$ 110,526 \$ 3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 85° 4 Structure \$ 75,739 \$ 302,956 \$ 45,443 \$ 181,774 \$ 121,182 \$ 3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80° 4 Structure \$ 81,493 \$ 325,970 \$ 48,896 \$ 195,582 \$ 130,388 \$ 3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80° 4 Structure \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,403 \$ 97,	3.27		2	Structure	\$ 61,513	\$ 123,025	\$ 36,908	\$ 73,815	\$ 98,420	\$ 196,840
3.29 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 85' 3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 90' 4 Structure \$ 81,493 \$ 325,970 \$ 48,896 \$ 195,582 \$ 130,388 \$ 3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80' 1 Structure \$ 97,403 \$ 97,403 \$ 58,442 \$ 58,442 \$ 155,844 \$ 3.32 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 85' 6 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,282 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95' 1 Structure \$ 117,233 \$ 703,518 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95' 1 Structure \$ 117,2408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115' 1 Structure \$ 178,026 \$ 178,026 \$ 106,815 \$ 106,815 \$ 284,841 \$ 3.36 Remove Existing Foundation 50 EA \$ - \$ - \$ 7,500 \$ 375,000 \$ 7,500 \$ 3.37 Remove Existing Structure and Accessories 994 EA \$ - \$ - \$ 5 5,539 \$ 3,688,641 \$ 6,045 \$ 1.54 CONDUCTOR, SHIELDWIRE, OPGW								·		
3.30 1-CKT 345KV 3-POLE TANGENT DEADEND (10°-5°) - 90' 4 Structure \$ 81,493 \$ 325,970 \$ 48,896 \$ 195,582 \$ 130,388 \$ \$ 3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80' 1 Structure \$ 97,403 \$ 97,403 \$ 58,442 \$ 58,442 \$ 155,844 \$ 3.32 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 85' 6 Structure \$ 105,802 \$ 634,809 \$ 63,481 \$ 380,885 \$ 169,282 \$ \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90' 6 Structure \$ 117,253 \$ 703,518 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95' 1 Structure \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115' 1 Structure \$ 178,026 \$ 178,026 \$ 106,815 \$ 106,815 \$ 284,841 \$ \$ 3.36 Remove Existing Foundation \$ 50 EA \$ - \$ - \$ - \$ \$ 7,500 \$ 375,000 \$ 7,500 \$ \$ 3.37 Remove Existing Structure and Accessories \$ 994 EA \$ - \$ - \$ - \$ \$ 12,500 \$ 12,425,000 \$ 12,425,000 \$ \$ 12,500 \$ \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815		1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 85'								
3.31 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80°	3.30		4	Structure	\$ 81,493	\$ 325,970	\$ 48,896	\$ 195,582	\$ 130,388	\$ 521,552
3.32 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 85' 6 Structure \$ 105,802 \$ 634,809 \$ 634,809 \$ 634,81 \$ 380,885 \$ 169,282 \$ 3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90' 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95' 1 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115' 1 Structure \$ 178,026 \$ 178,026 \$ 106,815 \$ 106,815 \$ 284,841 \$ 3.36 Remove Existing Foundation \$ 50 EA \$ - \$ - \$ 7,500 \$ 375,000 \$ 7,500 \$ 3.37 Remove Existing Structure and Accessories \$ 994 EA \$ - \$ - \$ 12,500 \$ 12,425,000 \$ 12,425,000 \$ 12,500 \$ 13,38 Install Grounding and Grounding Accessories \$ 666 Pole \$ 506 \$ 336,996 \$ 5,539 \$ 3,688,641 \$ 6,045 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,405 \$ 100,40			1							\$ 155,844
3.33 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90' 6 Structure \$ 117,253 \$ 703,518 \$ 70,352 \$ 422,111 \$ 187,605 \$ 3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95' 1 Structure \$ 129,408 \$ 129,408 \$ 77,645 \$ 77,645 \$ 207,052 \$ 3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115' 1 Structure \$ 178,026 \$ 178,026 \$ 106,815 \$ 106,815 \$ 284,841 \$ 3.36 Remove Existing Foundation 50 EA \$ - \$ - \$ 7,500 \$ 375,000 \$ 7,500 \$ 333,000 \$ 7,500 \$ 333,000 \$ 7,500 \$ 333,000 \$ 12,425,000 \$ 12,425,000 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106,815 \$ 106	3.32	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 85'	6	Structure	\$ 105,802	\$ 634,809	\$ 63,481	\$ 380,885	\$ 169,282	\$ 1,015,694
3.34 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95'	3.33		6	Structure	\$ 117,253	\$ 703,518	\$ 70,352	\$ 422,111	\$ 187,605	\$ 1,125,629
3.35 1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115' 1 Structure \$ 178,026 \$ 178,026 \$ 106,815 \$ 284,841 \$ 3.36 Remove Existing Foundation 50 EA \$ - \$ - \$ 7,500 \$ 375,000 \$ 7,500 \$ 3.37 Remove Existing Structure and Accessories 994 EA \$ - \$ - \$ 12,500 \$ 12,425,000 \$ 12,425,000 \$ 12,500 \$ 13.38 Install Grounding and Grounding Accessories 666 Pole \$ 506 \$ 336,996 \$ 5,539 \$ 3,688,641 \$ 6,045 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100.000 \$ 100	3.34		1	Structure			\$ 77,645	\$ 77,645	\$ 207,052	\$ 207,052
3.36 Remove Existing Foundation 50 EA \$ - \$ - \$ 7,500 \$ 375,000 \$ 7,500 \$ 375,000 \$ 12,425,000 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,500 \$ 12,50	3.35	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure						
3.38 Install Grounding and Grounding Accessories 666 Pole \$ 506 \$ 336,996 \$ 5,539 \$ 3,688,641 \$ 6,045 \$ TOTAL - STRUCTURES: 4. CONDUCTOR, SHIELDWIRE, OPGW \$ 14,839,646 \$ 25,190,231 \$ 4 \$ 4					\$ -					
TOTAL - STRUCTURES: \$ 14,839,646 \$ 25,190,231 \$ 4 4. CONDUCTOR, SHIELDWIRE, OPGW \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 \$ 0	3.37	Remove Existing Structure and Accessories	994	EA	\$ -	\$ -	\$ 12,500	\$ 12,425,000	\$ 12,500	\$ 12,425,000
4. CONDUCTOR, SHIELDWIRE, OPGW			666	Pole	\$ 506	\$ 336,996	\$ 5,539	\$ 3,688,641	\$ 6,045	\$ 4,025,637
	TOTAL - STRUC	CTURES:				\$ 14,839,646		\$ 25,190,231		\$ 40,029,876
4.1 345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (Edic to 12.6 Miles) 2.228.688 LF 5 1.90 5 4.234.507 5 5.00 5 11.143.440 5 6.90 6 1	4. CONDUCTO	R, SHIELDWIRE, OPGW								
	4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (Edic to 12.6 Miles)	2,228,688	LF	\$ 1.90	\$ 4,234,507	\$ 5.00	\$ 11,143,440	\$ 6.90	\$ 15,377,947

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	te	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL	
4.2	(1) OPGW 36 Fiber AC-33/38/571 (Edic to 12.6 Miles)	301,594	LF	\$ 1.3	35	\$ 407,152	\$ 5.00	\$ 1,507,970) \$ 6.35	\$ 1,	1,915,122
4.3	(1) 3/8" EHS7 Steel (Edic to 12.6 Miles)	271,656	LF		\rightarrow	\$ 127,678		\$ 1,358,280	_		1,485,958
4.4	(7.7)	,,,,,		,		, ,,,,,	,	,,,,,,,	1		,,
4.5											
4.6					_						
4.7	Remove Existing Conductor and Accessories	121.0	Mile	Ś .	-	\$ -	\$ 30,000	\$ 3,630,000	\$ 30,000.00	\$ 3.	3,630,000
4.8	Remove Existing OPGW and Accessories	108.4	Mile	· · · · · · · · · · · · · · · · · · ·	-	-	\$ 12,000	\$ 1,300,800			1,300,800
4.9	-	108.4	Mile		\rightarrow		·	\$ 1,300,800			1,300,800
	Remove Existing OHSW and Accessories	108.4	iville	\$	-	\$ -	\$ 12,000	\$ 1,500,600	3 12,000.00	\$ 1,	,,500,600
4.10					\dashv						
4.11					-						
4.12					_						
4.13	Rider Poles (187 Locations)	93	Set		50		\$ 3,500			-	488,250
4.14	Rider Poles - Relocated	94	Set	\$.	\rightarrow	т	\$ 3,500	\$ 329,000		-	329,000
TOTAL: COND	DUCTOR, SHIELDWIRE, OPGW:					\$ 4,932,087		\$ 20,895,790)	\$ 25,	5,827,877
	R, FITTINGS, HARDWARE										
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,276	Assembly	\$ 1,80	00	\$ 2,296,800	\$ 720	\$ 918,720	\$ 2,520	\$ 3,	3,215,520
5.2	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	480	Assembly	\$ 1,80	00	\$ 864,000	\$ 720	\$ 345,600	\$ 2,520	\$ 1,	1,209,600
5.3			Assembly			\$ -		\$ -	\$ -	\$	-
5.4	OPGW Assembly - Tangent	304	Assembly	\$ 20	00	\$ 60,800	\$ 150	\$ 45,600	\$ 350	\$	106,400
5.5	OPGW Assembly - Angle / DE	64	Assembly	\$ 25	50	\$ 16,000	\$ 150	\$ 9,600	\$ 400	\$	25,600
5.6	OHSW Assembly - Tangent	274	Assembly	\$ 20	00	\$ 54,800	\$ 150	\$ 41,100	\$ 350	\$	95,900
5.7	OHSW Assembly - Angle / DE	56	Assembly	_	\rightarrow	\$ 14,000	\$ 150	\$ 8,400	_	Ś	22,400
5.8	OPGW Splice Boxes	27	Assembly	\$ 1,74	-	\$ 47,146	\$ 2,274	\$ 61,398		Ś	108,544
5.9	OPGW Splice & Test	27	EA	\$ 2,52	\rightarrow	\$ 68,040	\$ 2,520	\$ 68,040		-	136,080
5.10	Spacer - Conductor	5,244	EA		\rightarrow	\$ 262,200	\$ 35	\$ 183,540		-	445,740
5.11	Vibration Dampers - Conductor	4,164	EA		-	\$ 145,740	\$ 35	\$ 145,740			291,480
5.12	·	1,087	EA		27		\$ 35		_	\$	67,394
	Shield wire / OPGW Dampers, Misc. Fittings				-						
5.13	Replace - Mono Pole Vertical Tangent (1-Group of 18-Bells Each Assembly)	480	Assembly	\$ 1,80	-	\$ 864,000	\$ 720	\$ 345,600			1,209,600
5.14	Replace - Dead-end & Angle Insulators (1, Group of 18-Bells Each Assembly)	195	Assembly	\$ 1,80	\rightarrow	7,	\$ 720	\$ 140,400			491,400
5.15	Guys, Anchors, and Accessories	-	EA	\$ 91	-	\$ -	\$ 1,058	\$ -	\$ 1,970	\$	-
5.16	Misc. materials (Signs and Markers)	66.8	Mile	\$ 77	-	\$ 51,436	\$ 1,006	\$ 67,203			118,637
TOTAL - INSU	ILATORS, FITTINGS, HARDWARE:					\$ 5,125,311		\$ 2,418,984	1	\$ 7,	7,544,295
A. Trans	smission Line Edic to Princetown					\$ 28,036,826		\$ 94,909,827	,	\$ 122,	2,946,653
	IOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
o. Wiody DEW	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$ -	-	\$ -	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467	ė 1	1,229,467
0.1		1	LS	\$ -	-	\$ -	\$ 1,229,467	\$ 1,229,40	3 1,229,467	\$ 1,	.,229,467
6.2	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 6,597,194	\$ 6,597,194	\$ 6,597,194	\$ 6,	5,597,194
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467	\$ 1,	1,229,467
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -		\$ -	\$ 1,229,467	\$ 1,229,467	\$ 1,229,467	\$ 1,	1,229,467
	Engineering				T						
6.5	Design Engineering	1	LS	\$ -	寸	\$ -	\$ 6,147,333	\$ 6,147,333	\$ \$ 6,147,333	\$ 6,	5,147,333
6.6	Lidar	1	LS	\$ -	寸	\$ -	\$ 368,840	\$ 368,840			368,840
6.7	Geotech	67	Location	\$ -	-		\$ 3,500	\$ 234,500			234,500
6.8	Surveying/Staking	1	LS	\$ -	_		\$ 860,627	·			860,627
	Testing & Commissioning	-		1	\dashv	•	,32,		1 223,027		
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\dashv	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	4	40,000
0.5	Permitting and Additional Costs	1	LJ	-	\dashv	-	÷ 40,000	40,000	40,000	7	-0,000
C 10			16	+	\dashv	ć	ć	ć	<u> </u>	6	
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	-			\$ -	•	\$	-
6.11	Environmental Mitigation	-	LS	\$ -	-		\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$ -			\$ 368,840				368,840
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	-		\$ -	\$ -	\$ -	\$	
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -		\$ -	\$ 8,640,000	\$ 8,640,000	\$ 8,640,000	\$ 8,	3,640,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Materia	ial Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17	Compensation for use of 1 Ckt - NYPA Structures (92 Structures)	1	LS	\$ -	\$	-	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123
6.18	Sales Tax on Materials	1	LS	\$ 2,242,946	\$	2,242,946	\$ -	\$ -	\$ 2,242,946	\$ 2,242,946
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 122,947	\$ 122,947	\$ 122,947	\$ 122,947
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	2,242,946		\$ 35,987,803		\$ 38,230,749

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A. TL Edic-Princetown

B. Transmission Line Princetown to Rotterdam

Estimate Revision: Total: \$ 25,079,704

NAT & NYPA - T026 - ((Segment A, Base)				
		Supply	Installation		Total
B. Transmission Line Princetown to Rotterdam					
1. CLEARING & ACCESS	\$	6,000	\$ 3,038,200	\$	3,044,200
2. FOUNDATIONS	\$	417,002	\$ 3,778,708	\$	4,195,711
3. STRUCTURES	\$	3,876,135	\$ 4,280,943	\$	8,157,078
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	722,365	\$ 2,620,705	\$	3,343,070
5. INSULATORS, FITTINGS, HARDWARE	\$	1,199,031	\$ 549,192	\$	1,748,223
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	497,643	\$ 4,093,779	\$	4,591,422
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	6,718,177	\$ 18,361,527	\$	25,079,704
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	Ś	6.718.177	\$ 18.361.527	Ś	25.079.704

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Transi	mission Line Princetown to Rotterdam								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	24.0	Acre	\$ -	\$ -	\$ 5,000	\$ 120,000	\$ 5,000	\$ 120,000
1.3	Access Road	5,280	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	26,400	LF	\$ -	\$ -	\$ 4	,		
1.5	Matting - Access and ROW	21,120	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	2,775	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	5	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	5	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	185,000	SF	\$ -	\$ -	\$ 4	,		
1.10	Restoration for Work Pad areas	37,000	SF	\$ -	\$ -	\$ 0.2	,		
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	- 10	EA	\$ - \$ -	\$ -	\$ 14,445 \$ 4.580		\$ 14,445	
1.13	Stabilized Construction Entrance	10	EA	7	· ·	7 .,000			
1.14 1.15	Maintenance and Protection of Traffic on Public Roads	10	EA EA	\$ -	\$ - \$ -	\$ 4,130 \$ 2,500		\$ 4,130 \$ 4,500	
1.15	Gates Culverts / Misc. Access	- 8	EA EA	\$ 2,000	\$ 6,000	\$ 2,500			
1.17	Concrete Washout Station	10	EA	\$ 730	\$ 0,000	\$ 1,850			\$ 18,500
	ING & ACCESS:	10	EA	, -	\$ 6,000	\$ 1,630	\$ 3,038,200		\$ 3.044.200
2. FOUNDATIO					5 0,000		3,038,200		3 3,044,200
2.1	Direct Embed Foundations - 6' x 18'	56	EA	\$ 1,857	\$ 104,018	\$ 18,603	\$ 1,041,794	\$ 20,461	\$ 1,145,812
2.2	Direct Embed Foundations - 6' x 20'	4	EA	\$ 2,046	\$ 8,185	\$ 20,562			\$ 90,432
2.3	Direct Embed Foundations - 6' x 22'	8	EA	\$ 2,235	\$ 17,880	\$ 22,520			\$ 198,040
2.4	Direct Embed Foundations - 7' x 25'	4	EA	\$ 3,105		\$ 34,650		,	
2.5	Drilled Pier - 6' x 19'	6	EA	\$ 17,204	\$ 103,223	\$ 17,391		·	\$ 207,570
2.6	Drilled Pier - 8' x 27'	4	EA	\$ 42,819	\$ 171,274	\$ 57,340	\$ 229,359	\$ 100,158	\$ 400,633
2.7	Rock Excavation Adder	1,001.1	CY	\$ -	\$ -	\$ 2,000	\$ 2,002,200	\$ 2,000	\$ 2,002,200
TOTAL - FOUN	DATIONS:				\$ 417,002		\$ 3,778,708		\$ 4,195,711
3. STRUCTURE	S								
3.1	2x 1-CKT 345KV DELTA TANGENT (0°-1°) - 115'	24	Structure	\$ 85,544	\$ 2,053,056	\$ 51,326	\$ 1,231,834	\$ 136,870	\$ 3,284,890
3.2	2x 1-CKT 345KV DELTA TANGENT (0°-1°) - 135'	2	Structure	\$ 106,005	\$ 212,010	\$ 63,603	\$ 127,206	\$ 169,608	\$ 339,216
3.3	2x 1-CKT 345KV DELTA SMALL ANGLE (1°-15°) - 115'	2	Structure	\$ 141,673	\$ 283,346	\$ 85,004	\$ 170,008	\$ 226,677	\$ 453,354
3.4	2x 1-CKT 345KV VERTICAL TANGENT DEADEND (0°-5°) - 115'	4	Structure	\$ 109,816	\$ 439,264	\$ 65,890			
3.5	2x 1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	2	Structure	\$ 232,656	\$ 465,312	\$ 139,594			
3.6	2x 1-CKT 345KV 3-POLE LARGE ANGLE DEADEND (60°-90°) - 115'	1	Structure	\$ 176,342					
3.7	2x 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 65'	1	Structure	\$ 99.493	\$ 99,493	\$ 59,696		\$ 159,189	
3.8	, , ,	1			,				
5.8	2x 1-CKT 345KV DELTA TANGENT (0°-1°) HD- 115'	1	Structure	\$ 105,820	\$ 105,820	\$ 63,492	\$ 63,492	, , ,	\$ 169,312

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.9	Remove Existing Foundation	22	EA	\$	-	\$ -	\$ 7,500	\$ 163,500	\$ 7,500	\$ 163,500
3.10	Remove Existing Structure and Accessories	109	EA	\$	-	\$ -	\$ 12,500	\$ 1,362,500	\$ 12,500	\$ 1,362,500
3.11	Install Grounding and Grounding Accessories	82	Pole	\$	506	\$ 41,492	\$ 5,539	\$ 454,157	\$ 6,045	\$ 495,649
	CTURES PRINCTOWN TO NEW SCOTLAND:					\$ 3,876,135		\$ 4,280,943		\$ 8,157,078
4. CONDUCTO	DR, SHIELDWIRE, OPGW									
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (R1 - R36)	339,293	LF	\$	1.90	\$ 644,657	\$ 5.00	\$ 1,696,465	\$ 6.90	\$ 2,341,122
4.2	(1) OPGW 36 Fiber AC-33/38/571 (R1 - R36)	28,274	LF	\$	1.35	\$ 38,170	\$ 5.00	\$ 141,370	\$ 6.35	\$ 179,540
4.3	(1) 3/8" EHS7 Steel (R1 - R36)	28,274	LF	\$	0.47	\$ 13,289	\$ 5.00	\$ 141,370	\$ 5.47	\$ 154,659
4.5	Remove Existing Conductor and Accessories	10.0	Mile	\$	-	\$ -	\$ 30,000	\$ 300,000	\$ 30,000.00	\$ 300,000
4.6	Remove Existing OPGW and Accessories	10.0	Mile	\$	-	\$ -	\$ 12,000	\$ 120,000	\$ 12,000.00	\$ 120,000
4.7	Remove Existing OHSW and Accessories	10.0	Mile	\$	-	\$ -	\$ 12,000	\$ 120,000	\$ 12,000.00	\$ 120,000
4.8	Rider Poles	15	EA	Ś	1,750		\$ 3,500	\$ 52,500		\$ 78,750
4.9	Rider Poles - Relocated	14	Set	Ś		\$ -	\$ 3,500	\$ 49,000		\$ 49,000
	UCTOR, SHIELDWIRE, OPGW:	14	Jet	۶	-	\$ 722,365	\$ 3,500	\$ 2,620,705	\$ 3,300.00	\$ 3,343,070
	R, FITTINGS, HARDWARE					\$ 722,303		\$ 2,020,703		3 3,343,070
		240	Assambly	<u></u>	1 800	¢ 626.400	¢ 720	¢ 250.560	ć 2.520	¢ 976.060
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	348	Assembly	\$	-,	\$ 626,400	\$ 720	\$ 250,560		\$ 876,960
5.2	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	240	Assembly	\$	1,800	\$ 432,000	\$ 720	\$ 172,800		\$ 604,800
5.3	OPGW Assembly - Tangent	29	Assembly	\$	200	\$ 5,800	\$ 150	\$ 4,350	·	\$ 10,150
5.4	OPGW Assembly - Angle / DE	16	Assembly	\$	250	\$ 4,000	\$ 150	\$ 2,400	\$ 400	\$ 6,400
5.5	OHSW Assembly - Tangent	29	Assembly	\$	200	\$ 5,800	\$ 150	\$ 4,350	\$ 350	\$ 10,150
5.6	OHSW Assembly - Angle / DE	16	Assembly	\$	250	\$ 4,000	\$ 150	\$ 2,400	\$ 400	\$ 6,400
5.7	OPGW Splice Boxes	8	Assembly	\$	1,746	\$ 13,969	\$ 2,274	\$ 18,192	\$ 4,020	\$ 32,161
5.8	OPGW Splice & Test	8	EA	\$	2,520		\$ 2,520	\$ 20,160		\$ 40,320
5.9	Spacer - Conductor	1,002	EA	Ś	50		\$ 35	\$ 35,070		\$ 85,170
5.10		852	EA	Ś	35	· · · · · · · · · · · · · · · · · · ·	\$ 35	\$ 29,820		\$ 59,640
	Vibration Dampers - Conductor							,		
5.11	Shieldwire / OPGW Dampers, Misc. Fittings	116	EA	\$	27		\$ 35	\$ 4,060		\$ 7,192
5.12	Guys, Anchors, and Accessories	-	EA	\$		\$ -	\$ 1,058	\$ -	. ,	\$ -
5.13	Misc. materials (Signs and Markers)	5.0	Mile	\$	770		\$ 1,006	\$ 5,030	\$ 1,776	\$ 8,880
TOTAL - INSU	LATORS, FITTINGS, HARDWARE:					\$ 1,199,031		\$ 549,192		\$ 1,748,223
	mission Line Princetown to Rotterdam					\$ 6,220,534		\$ 14,267,748		\$ 20,488,282
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS									
	Contractor Mobilization / Demobilization		1.0	-		ć	ć 204.002	ć 204.002	ć 204.002	ć 204.002
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 204,883	\$ 204,883	\$ 204,883	\$ 204,883
6.2	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost	1	16				\$ 1.099.381	ć 1,000,381	ć 1,000,391	ć 1,000,391
6.2	Manager, SHEQ Staff, and Admin Staff)		LS				\$ 1,099,381	\$ 1,099,381	\$ 1,099,381	\$ 1,099,381
6.3	Utility PM and Project Oversite	1	LS	+		\$ -	\$ 204,883	\$ 204,883	\$ 204,883	\$ 204,883
6.4	Site Accommodation, Facilities, Storage	1	LS	Ś	-	\$ -	\$ 204,883	\$ 204,883		\$ 204,883
	Engineering	1		+*-		•	. 20.,303	. 20.,505	. 20.,000	. 20.,000
6.5	Design Engineering	1	LS	Ś	-	\$ -	\$ 1,024,414	\$ 1,024,414	\$ 1,024,414	\$ 1,024,414
6.6	LiDAR	1	LS	Ś	-	\$ -	\$ 61,465	\$ 61,465		\$ 61,465
6.7	Geotech	5	Location	Ś	-	\$ -	\$ 3,500	\$ 17,500	\$ 3,500	\$ 17,500
	Surveying/Staking	1	LS	Ś		\$ -	\$ 143,418	, , , , , , , , , , , , , , , , , , , ,	, ,,,,,	\$ 143,418
6.8		1	LS	,	-	-	\$ 143,418	\$ 143,418	\$ 143,416	\$ 143,416
	Testing & Commissioning			1.					_	
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs			+		A .	_	4	,	•
6.10	Environmental Licensing & Permitting Costs	-	LS	\$		\$ -	\$ -	\$ -		\$ -
6.11	Environmental Mitigation Warranties / LOC's	-	LS	\$		\$ -	\$ -	\$ -		\$ -
6.12 6.13	Real Estate Costs (New ROW)	1 1	LS LS	\$		\$ - \$ -	\$ 61,465 \$ -	\$ 61,465 \$ -		\$ 61,465 \$ -
6.14	Real Estate Costs (New ROW) Real Estate Costs (Incumbent Utility ROW)	1	LS	\$		\$ -	\$ 1,011,000	\$ 1,011,000		
				\$						
6.15	Legal Fees	-	LS	_		\$ -				\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$		\$ -	\$ -	\$ -		\$ -
6.17	Colos Toy on Materials	-	LS	\$		\$ -	\$ -	\$ -		\$ -
6.18	Sales Tax on Materials	1	LS	\$	497,643	\$ 497,643	\$ -	\$ -	\$ 497,643	\$ 497,643

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply	Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	- \$	20,488	\$ 20,488	\$ 20,488	\$ 20,488
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 497	643		\$ 4,093,779		\$ 4,591,422

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NAT & NYPA - T026 - (Segment A, Base) C. Transmission Line Princetown to New Scotland

Estimate Revision: 5 Total: \$ 47,721,093

NAT & NYPA - T026 - (Segment A,	Base)			
		Supply	Installation	Total
C. Transmission Line Princetown to New Scotland				
1. CLEARING & ACCESS	\$	31,000	\$ 11,223,694	\$ 11,254,694
2. FOUNDATIONS	\$	1,194,705	\$ 4,499,949	\$ 5,694,653
3. STRUCTURES	\$	6,879,617	\$ 5,578,039	\$ 12,457,656
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	1,564,842	\$ 4,756,290	\$ 6,321,132
5. INSULATORS, FITTINGS, HARDWARE	\$	1,767,073	\$ 847,291	\$ 2,614,365
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	914,979	\$ 8,463,615	\$ 9,378,594
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	12,352,215	\$ 35,368,878	\$ 47,721,093
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	12,352,215	\$ 35,368,878	\$ 47,721,093

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply	/ Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	то	DTAL
C. Transi	mission Line Princetown to New Scotland										
1. CLEARING &	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	26.0	Acre	\$	-	\$ -	\$ 15,000	\$ 390,000	\$ 15,000	\$	390,000
1.2	Clearing the ROW - Light (mowing)	57.0	Acre	\$	-	\$ -	\$ 5,000	\$ 285,000	\$ 5,000	\$	285,000
1.3	Access Road	20,803.2	LF	\$	-	\$ -	\$ 45	\$ 936,144	\$ 45	\$	936,144
1.4	Silt Fence	104,016.0	LF	\$	-	\$ -	\$ 4			\$	416,064
1.5	Matting - Access and ROW	83,212.8	LF	\$	-	\$ -	\$ 70				5,824,896
1.6	Matting - To Work Area	3,375.0	LF	\$	-	\$ -	\$ 70	\$ 236,250	\$ 70	\$	236,250
1.7	Snow Removal	19.7	Mile	\$	-	\$ -	\$ 16,000	\$ 315,200			315,200
1.8	ROW Restoration	19.7	Mile	\$	-	\$ -	\$ 10,000	\$ 197,000	\$ 10,000	\$	197,000
1.9	Work Pads	645,000.0	SF	\$	-	\$ -	\$ 4	\$ 2,270,400	\$ 4	\$	2,270,400
1.10	Restoration for Work Pad areas	129,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 19,350	\$ 0	\$	19,350
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$	-
1.12	Air Bridge	2	EA	\$	-	\$ -	\$ 14,445	\$ 28,890	\$ 14,445	\$	28,890
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$	-
1.14	Maintenance and Protection of Traffic on Public Roads	50	EA	\$	-	\$ -	\$ 4,130	\$ 206,500	\$ 4,130	\$	206,500
1.15	Gates	11	EA	\$	2,000	\$ 22,000	\$ 2,500	\$ 27,500	\$ 4,500	\$	49,500
1.16	Culverts / Misc. Access	12	EA	\$	750	\$ 9,000	\$ 1,250	\$ 15,000	\$ 2,000	\$	24,000
1.17	Concrete Washout Station	30	EA	\$	-	\$ -	\$ 1,850	\$ 55,500	\$ 1,850	\$	55,500
TOTAL - CLEAR	ING & ACCESS:					\$ 31,000		\$ 11,223,694		\$ 1	11,254,694
2. FOUNDATIO	NS .										
2.1	Direct Embed Foundations - 4' x 16'	100	EA	\$	941	\$ 94,073	\$ 7,398	\$ 739,787	\$ 8,339	\$	833,860
2.2	Direct Embed Foundations - 4' x 19'	14	EA	\$	1,104	\$ 15,455	\$ 8,703	\$ 121,847	\$ 9,807	\$	137,302
2.3	Direct Embed Foundations - 4' x 21'	2	EA	\$	1,213	\$ 2,425	\$ 9,574	\$ 19,147	\$ 10,786	\$	21,573
2.4	Direct Embed Foundations - 6' x 18'	9	EA	\$	1,857	\$ 16,717	\$ 18,603	\$ 167,431	\$ 20,461	\$	184,148
2.5	Direct Embed Foundations - 6' x 20'	14	EA	\$	2,046	\$ 28,648	\$ 20,562	\$ 287,864	\$ 22,608	\$	316,512
2.6	Direct Embed Foundations - 6' x 21'	25	EA	\$	2,141	\$ 53,516	\$ 21,541	\$ 538,521	\$ 23,681	\$	592,037
2.7	Direct Embed Foundations - 6' x 22'	4	EA	\$	2,235	\$ 8,940	\$ 22,520	\$ 90,080	\$ 24,755	\$	99,020
2.8	Direct Embed Foundations - 6' x 25'	5	EA	\$	2,518	\$ 12,591	\$ 25,457	\$ 127,287	\$ 27,976	\$	139,878
2.9	Direct Embed Foundations - 6' x 29'	1	EA	\$	2,896	\$ 2,896	\$ 29,374	\$ 29,374	\$ 32,270	\$	32,270
2.10	Direct Embed Foundations - 6' x 34'	4	EA	\$	3,273	\$ 13,093	\$ 33,290	\$ 133,162	\$ 36,564	\$	146,255
2.11	Direct Embed Foundations - 6' x 42'	3	EA	\$	4,123	\$ 12,369	\$ 42,103	\$ 126,308	\$ 46,225	\$	138,676
2.12	Direct Embed Foundations - 7' x 25'	1	EA	\$	3,105	\$ 3,105	\$ 34,650	\$ 34,650	\$ 37,756	\$	37,756
2.13	Direct Embed Foundations - 7' x 27'	1	EA	\$	3,337	\$ 3,337	\$ 37,316	\$ 37,316	\$ 40,652	\$	40,652
2.14	Direct Embed Foundations - 7' x 28'	1	EA	\$	3,452	\$ 3,452	\$ 38,648	\$ 38,648	\$ 42,101	\$	42,101
2.15	Drilled Pier - 6' x 20'	6	EA		8,064	\$ 108,384		\$ 109,564			217,949
2.16	Drilled Pier - 7' x 19'	15	EA		3,416						706,315
2.17	Drilled Pier - 7' x 24'	3	EA		9,270						176,579
2.18	Drilled Pier - 8' x 27'	1	EA		2,819						86,103
2.19	Drilled Pier - 8' x 83'	1	EA		8,456						300,475
2,20	Drilled Pier - 8' x 89'	1	EA		7,631						321,938

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.21	Drilled Pier - 9' x 34'	1	EA	\$	67,740	\$ 67,740	\$ 90,713	\$ 90,713	\$ 158,454	\$	158,454
2.22	Rock Excavation Adder	482.40	СУ	\$	-		\$ 2,000		\$ 2,000	\$	964,800
TOTAL - FOUI	NDATIONS:					\$ 1,194,705		\$ 4,499,949		\$	5,694,653
3. STRUCTUR	ES										
3.1	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 115'	7	Structure	\$	50,024	\$ 350,168	\$ 30,014	\$ 210,101		\$	560,269
3.2	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 120' 1-CKT 345KV VERTICAL TANGENT (0°-1°) - 125'	5 8	Structure	\$	52,207 55,685		\$ 31,324 \$ 33,411	\$ 156,621 \$ 267,288		\$	417,656 712,768
3.4	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 130'	9	Structure Structure	\$	58,257		\$ 34,954	\$ 314,585		\$	838,894
3.5	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 135'	4	Structure	\$	60,884			\$ 146,120			389,654
3.6	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 145'	1	Structure	\$	64,473		\$ 38,684	\$ 38,684			103,156
3.7	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 115'	1	Structure	\$	72,039		\$ 43,223	\$ 43,223		\$	115,262
3.8	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 135'	1	Structure	\$	92,278		\$ 55,367	\$ 55,367	\$ 147,645	\$	147,645
3.9	1-CKT 345KV VERTICAL TANGENT DEADEND (0°-5°) - 120'	1	Structure	\$	58,164		\$ 34,898	\$ 34,898			93,062
3.10 3.11	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 105'	1 43	Structure	\$	98,883 29,526		\$ 59,330 \$ 17,716	\$ 59,330 \$ 761,771			158,212 2,031,389
3.12	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 84' 1-CKT 345KV H-FRAME TANGENT (0°-1°) - 89'	5	Structure Structure	\$	32,708						261,664
3.13	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 93'	5	Structure	\$	34,540		\$ 20,724				276,316
3.14	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 107'	5	Structure	\$	45,936			\$ 137,807			367,484
3.15	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 80'	3	Structure	\$	55,241		\$ 33,145		\$ 88,386	\$	265,157
3.16	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80'	5	Structure	\$	69,079			\$ 207,237		\$	552,632
3.17	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 85'	1	Structure	\$	75,739		\$ 45,443	\$ 45,443		\$	121,182
3.18	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80'	5	Structure	\$	97,403		\$ 58,442	\$ 292,208			779,220
3.19 3.20	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95'	1	Structure	\$	129,408			\$ 77,645 \$ 106.815			207,052
3.21	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115' 2-CKT 115KV/345KV VERTICAL TANGENT (0°-1°) - 115'	7	Structure Structure	\$	178,026 54,631		\$ 106,815 \$ 32,778	\$ 106,815 \$ 229,448	\$ 284,841 \$ 87,409	\$	284,841 611,862
3.22	2-CKT 115KV/345KV VERTICAL TANGENT (0 -1) - 115 2-CKT 115KV/345KV VERTICAL TANGENT (0 -1) - 125'	4	Structure	\$	62,604		\$ 37,562		\$ 100,166	\$	400,666
3.23	2-CKT 115KV/345KV VERTICAL TANGENT (0°-1°) - 135'	1	Structure	\$	68,894			\$ 41,336			110,230
3.24	2-CKT 115KV/345KV VERTICAL SMALL ANGLE (1°-15°) - 155'	1	Structure	\$	149,480	\$ 149,480	\$ 89,688	\$ 89,688	\$ 239,168	\$	239,168
3.25	2-CKT 115KV/345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$	173,808	\$ 173,808	\$ 104,285	\$ 104,285	\$ 278,092	\$	278,092
3.26	2-CKT 115KV/345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 125'	1	Structure	\$	202,797			\$ 121,678			324,475
3.27	115KV DUMMY DE, Drilled Pier, 85'	2	Structure	\$	58,164	\$ 116,328	\$ 34,898	\$ 69,797	\$ 93,062	\$	186,125
3.28	Remove Existing Foundation	4	EA	\$	-	\$ -	\$ 7,500	\$ 30,000	\$ 7,500		30,000
3.29	Remove Existing Structure and Accessories	24	EA	\$	-	\$ -	\$ 12,500				300,000
3.30	Install Grounding and Grounding Accessories	214	Pole	\$	506	\$ 108,284	\$ 5,539	\$ 1,185,239	\$ 6,045	\$	1,293,523
TOTAL - STRU						\$ 6,879,617		\$ 5,578,039		\$	12,457,656
	OR, SHIELDWIRE, OPGW	554.054				4 257 742		4 2200 770	4	•	4.555.400
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (ENS-336 to ENS-464) (1) OPGW 36 Fiber AC-33/38/571 (ENS-336 to ENS-464)	110,326	LF LF	\$	1.90				\$ 6.90	\$	4,567,483 700,570
				<u> </u>							
4.3	(1) 3/8" EHS7 Steel (ENS-336 to ENS-464)	75,398	LF	\$	0.47	\$ 35,437	\$ 5.00	\$ 376,990	\$ 5.47	\$	412,427
4.4		-		\$	-	\$ -	\$ -	\$ -	\$ -	\$	
4.5	115kV - (1) 954kcmil 54/7 ACSS "Cardinal" (ENS-336 to ENS-464)	41,580	LF	\$	1.90		\$ 5.00	\$ 207,900	\$ 6.90	\$	286,902
4.6	(1) OPGW 36 Fiber AC-33/38/571 (ENS-336 to ENS-464)	-	LF	\$	1.35	\$ -	\$ 5.00	\$ -	\$ 6.35	\$	-
4.7	(1) 3/8" EHS7 Steel (ENS-336 to ENS-464)	-	LF	\$	0.47		\$ 5.00	\$ -	\$ 5.47	\$	-
4.8	Remove Existing Conductor and Accessories	2.5	Mile	\$	-	\$ -	\$ 30,000	\$ 75,000			75,000
4.9	Remove Existing OPGW and Accessories	2.5	Mile	\$	-	\$ -	\$ 12,000	\$ 30,000	\$ 12,000.00	\$	30,000
4.10	Remove Existing OHSW and Accessories	2.5	Mile	\$	-	\$ -	\$ 12,000	\$ 30,000	\$ 12,000.00	\$	30,000
4.11	Rider Poles (50 Locations)	25	Set	\$	1,750		\$ 3,500	\$ 87,500	\$ 5,250.00	\$	131,250
4.12	Rider Poles - Relocated	25	Set	\$	-		\$ 3,500		\$ 3,500.00		87,500
	DUCTOR, SHIELDWIRE, OPGW:			_		\$ 1,564,842		\$ 4,756,290		\$	6,321,132
5. INSULATOR	R, FITTINGS, HARDWARE 345kV Tangent (1-Group of 18-Bells Each Assembly)	538	Assembly	\$	1,800	\$ 968,400	\$ 720	\$ 387,360	\$ 2,520	ė	1,355,760
5.2	115kV Tangent (1-Group of 16-bells Each Assembly)	78	Assembly	Ś	900						113,880
				ļ ·		·		·			
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	255	Assembly	\$	1,800						642,600
5.4 5.5	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	21	Assembly Assembly	+>	900	\$ 18,900 \$ -	\$ 560		\$ 1,460 \$ -	\$	30,660
5.6			Assembly			\$ -		'	\$ -	\$	
3.0			Assembly			· -		· -	· ·		11 -6(0

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Materi	ial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.7	OPGW Assembly - Tangent	110	Assembly	\$ 200	\$	22,000	\$ 150	\$ 16,500	\$ 350	\$ 38,500
5.8	OPGW Assembly - Angle / DE	34	Assembly	\$ 250	\$	8,500	\$ 150	\$ 5,100	\$ 400	\$ 13,600
5.9	OHSW Assembly - Tangent	61	Assembly	\$ 200	\$	12,200	\$ 150	\$ 9,150	\$ 350	\$ 21,350
5.10	OHSW Assembly - Angle / DE	24	Assembly	\$ 250	\$	6,000	\$ 150	\$ 3,600	\$ 400	\$ 9,600
5.11	OPGW Splice Boxes	8	Assembly	\$ 1,746	\$	13,969	\$ 2,274	\$ 18,192	\$ 4,020	\$ 32,161
5.12	OPGW Splice & Test	8	EA	\$ 2,520	\$	20,160	\$ 2,520	\$ 20,160	\$ 5,040	\$ 40,320
5.13	Spacer - Conductor	1,773	EA	\$ 50	\$	88,650	\$ 35	\$ 62,055	\$ 85	\$ 150,705
5.14	Vibration Dampers - Conductor	1,596	EA	\$ 35	\$	55,860	\$ 35	\$ 55,860	\$ 70	\$ 111,720
5.15	Shieldwire / OPGW Dampers, Misc. Fittings	293	EA	\$ 27	\$	7,911	\$ 35	\$ 10,255	\$ 62	\$ 18,166
5.16	Guys, Anchors, and Accessories	-	EA	\$ 912	\$	-	\$ 1,058	\$ -	\$ 1,970	\$ -
5.17	Misc. materials (Signs and Markers)	19.9	Mile	\$ 770	\$	15,323	\$ 1,006	\$ 20,019	\$ 1,776	\$ 35,342
OTAL - INSU	LATORS, FITTINGS, HARDWARE:				\$	1,767,073		\$ 847,291		\$ 2,614,365
C. Trans	mission Line Princetown to New Scotland				\$	11,437,237		\$ 26,905,263		\$ 38,342,499
. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
6.1	Mob / Demob	1	LS	\$ -	\$	-	\$ 383,425	\$ 383,425	\$ 383,425	\$ 383,425
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 2,057,420	\$ 2,057,420	\$ 2,057,420	\$ 2,057,420
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 383,425	\$ 383,425	\$ 383,425	\$ 383,425
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 383,425	\$ 383,425	\$ 383,425	\$ 383,425
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 1,917,125	\$ 1,917,125	\$ 1,917,125	\$ 1,917,125
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 115,027	\$ 115,027	\$ 115,027	\$ 115,027
6.7	Geotech	20	Location	\$ -	\$	-	\$ 3,500	\$ 70,000	\$ 3,500	\$ 70,000
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 268,397	\$ 268,397	\$ 268,397	\$ 268,397
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 115,027	\$ 115,027	\$ 115,027	\$ 115,027
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ 215,000	\$ 215,000	\$ 215,000	\$ 215,000
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ 2,477,000	\$ 2,477,000	\$ 2,477,000	\$ 2,477,000
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17	Ť '	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 914,979		914,979	\$ -	\$ -	\$ 914,979	
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS	1	\$	-	\$ 38,342	•	\$ 38,342	
	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	-		1	Ś		,- 12	\$ 8,463,615	1	\$ 9,378,594

D. Rotterdam Substation - Install

Estimate Revision: 5 Total: \$ 54,685,844

NAT & NYPA - T026 - (Segn	nent A,	Base)		
		Supply	Installation	Total
D. Rotterdam Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,896,891	\$ 7,763,755	\$ 10,660,646
2. SUBSTATION FOUNDATIONS	\$	2,443,003	\$ 2,616,200	\$ 5,059,203
3. SUBSTATION STRUCTURES	\$	944,980	\$ 944,980	\$ 1,889,960
4. MAJOR EQUIPTMENT	\$	11,915,000	\$ 2,970,000	\$ 14,885,000
5. SMALL EQUIPTMENT / MATERIALS	\$	1,994,540	\$ 1,060,500	\$ 3,055,040
6. CONTROL HOUSE / PANELS	\$	2,927,500	\$ 1,477,500	\$ 4,405,000
7. MISC ITEMS	\$	1,441,675	\$ 2,331,950	\$ 3,773,625
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,965,087	\$ 8,992,283	\$ 10,957,370
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	26,528,676	\$ 28,157,168	\$ 54,685,844
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	26,528,676	\$ 28,157,168	\$ 54,685,844

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply F	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Rotte	rdam Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	7.4	ACRES	\$	-	\$ -	\$ 203,000	\$ 1,497,125	\$ 203,000	\$ 1,497,125
1.2	Station stone within substation fence.	3,175	СУ	\$	27	\$ 85,725	\$ 75	\$ 238,125	\$ 102	\$ 323,850
1.3	Substation Fence	2,130	LF	\$	100	\$ 213,000	\$ 100	\$ 213,000	\$ 200	\$ 426,000
1.4	Retaining Wall (1065' x 13')	1	LS	\$ 406	,755	\$ 406,755	\$ 925,345	\$ 925,345	\$ 1,332,100	\$ 1,332,100
1.5	Compacted Fill (124,583cy Sand)	124,583	CY	\$	17	\$ 2,117,911	\$ 20	\$ 2,491,660	\$ 37	\$ 4,609,571
1.6	Permanent Access Road - 20'-Wide (From Gordon RD)	2,100	LF	\$	35	\$ 73,500	\$ 285	\$ 598,500	\$ 320	\$ 672,000
1.7	Natural Gas Transmission Line Relocation	1	LS	\$	-		\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	PREP/ GRADING/ FENCING / CIVIL					\$ 2,896,891		\$ 7,763,755		\$ 10,660,646
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	8	EA	\$ 14,	,940	\$ 119,520	\$ 16,000	\$ 128,000	\$ 30,940	\$ 247,520
2.1b	Capacitor Bank Foundations	0	EA	\$ 56	,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	32	EA	\$ 26	,145	\$ 836,640	\$ 28,000	\$ 896,000	\$ 54,145	\$ 1,732,640
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26	,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	102	EA	\$ 4	,482	\$ 457,164	\$ 4,800	\$ 489,600	\$ 9,282	\$ 946,764
2.1f	Station Service Transformer Stand Foundation	1	EA	\$ 4	,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,282
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	42	EA	\$ 4,	,482	\$ 188,244	\$ 4,800	\$ 201,600	\$ 9,282	\$ 389,844
2.1j	Instrument Transformer Stand Foundations	33	EA	\$ 4	,482	\$ 147,906	\$ 4,800	\$ 158,400	\$ 9,282	\$ 306,306
2.1k	Arrester Stand Foundations	6	EA	\$ 4	,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1m	Wave Trap Stand Foundations	2	EA	\$ 4,	,482	\$ 8,964	\$ 4,800	\$ 9,600	\$ 9,282	\$ 18,564
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2	230kV								
2.2a	Circuit Breaker Foundations	1	EA	\$ 11,952	\$ 11,952	\$ 12,800	\$ 12,800	\$ 24,752	\$ 24,752
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 22,410	\$ 89,640	\$ 24,000	\$ 96,000	\$ 46,410	\$ 185,640
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	8	EA	\$ 3,735	\$ 29,880	\$ 4,000	\$ 32,000	\$ 7,735	\$ 61,880
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	9	EA	\$ 3,735	\$ 33,615	\$ 4,000	\$ 36,000	\$ 7,735	\$ 69,615
2.2k	Arrester Stand Foundations	3	EA	\$ 3,735	\$ 11,205	\$ 4,000	\$ 12,000	\$ 7,735	\$ 23,205
2.2m	Wave Trap Stand Foundations	1	EA	\$ 3,735	\$ 3,735	\$ 4,000	\$ 4,000	\$ 7,735	\$ 7,735
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 16,434	\$ 65,736	\$ 17,600	\$ 70,400	\$ 34,034	\$ 136,136
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	4	EA	\$ 2,988	\$ 11,952	\$ 3,200	\$ 12,800	\$ 6,188	\$ 24,752
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3j	Instrument Transformer Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3k	Arrester Stand Foundations	6	EA	\$ 2,988	\$ 17,928		\$ 19,200	\$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		-							
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	1	EA	\$ 97,110	\$ 97,110	\$ 104,000	\$ 104,000	\$ 201,110	\$ 201,110
2.4b	345-115kV Transformer Foundation w/ Oil Containment	2	EA	\$ 74,700	\$ 149,400	\$ 80,000	\$ 160,000	\$ 154,700	\$ 309,400
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	·								
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 97,110	\$ 97,110	\$ 104,000	\$ 104,000	\$ 201,110	\$ 201,110
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
							-		•
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ 2,443,003		\$ 2,616,200		\$ 5,059,203
3. SUBSTATIO	N STRUCTURES 345kV								
3.1a	Substation A-Frame Structures - Stand alone	8	EA	\$ 37,000	\$ 296,000	\$ 37,000	\$ 296,000	\$ 74,000	\$ 592,000
3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ 296,000	\$ 37,000		\$ 74,000	
		17	EA	\$ 37,000	T				
3.1c	Switch Stands	17	ŁΑ) 14,800	\$ 251,600	\$ 14,800	ع 251,600	\$ 29,600	503,20 ج

Item	Item Description E	stimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
3.1d	Station Service Transformer Stand	1	EA	\$	14,800	\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$	29,600
3.1e	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
3.1f	Bus Support 1 Ph	42	EA	\$	3,700	\$ 155,400	\$ 3,700	\$ 155,400	\$ 7,400	\$	310,800
3.1g	Instrument Transformer Stand	33	EA	\$	1,850	\$ 61,050	\$ 1,850	\$ 61,050	\$ 3,700	\$	122,100
3.1h	Arrester Stand	6	EA	\$	1,850	\$ 11,100	\$ 1,850	\$ 11,100	\$ 3,700	\$	22,200
3.1j	Wave Trap Stand	2	EA	\$	7,400	\$ 14,800	\$ 7,400	\$ 14,800	\$ 14,800	\$	29,600
3.1k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.2	230kV										
3.2a	Substation A-Frame Structures - Stand alone	1	EA	\$	33,300	\$ 33,300	\$ 33,300	\$ 33,300	\$ 66,600	\$	66,600
3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	Ś	33,300	\$ 33,300	\$ 33,300	\$ 33,300	\$ 66,600	Ś	-
3.2b 3.2c	Switch Stands	2	EA	\$	12,025	\$ 24,050	\$ 33,300	\$ 24,050	\$ 24,050	Ś	48,100
		0		Ś						\$	
3.2d	Station Service Transformer Stand		EA	+	12,025	\$ -	, , , , ,	\$ -		\$	-
3.2e	Bus Support 3ph	0	EA	\$	2 775	\$ -	\$ -	\$ -	\$ -	\$	-
3.2f	Bus Support 1 Ph	0	EA	\$	2,775	\$ -	\$ 2,775	\$ -	\$ 5,550	\$	- 22 240
3.2g	Instrument Transformer Stand	9	EA	\$	1,295	\$ 11,655		\$ 11,655	\$ 2,590	\$	23,310
3.2h	Arrester Stand	3	EA	\$	1,295	\$ 3,885	\$ 1,295	\$ 3,885	\$ 2,590	\$	7,770
3.2j	Wave Trap Stand	1	EA	\$	5,550	\$ 5,550	\$ 5,550	\$ 5,550	\$ 11,100	\$	11,100
3.2k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.3	115kV										
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$	18,500	\$ 37,000	\$ 18,500	\$ 37,000	\$ 37,000	\$	74,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$	-
3.3c	Switch Stands	2	EA	\$	7,955	\$ 15,910	\$ 7,955	\$ 15,910	\$ 15,910	\$	31,820
3.3d	Fuse Stand	0	EA	\$	7,955	\$ -		\$ -	\$ 15,910	\$	-
3.3e	Bus Support 3ph	0	EA	\$	3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$	-
3.3f	Bus Support 1 Ph	0	EA	\$	1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$	-
3.3g	Instrument Transformer Stand	6	EA	\$	740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$	8,880
3.3h	Arrester Stand	6	EA	\$	740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$	8,880
3.3j	Wave Trap Stand	0	EA	\$	3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$	-
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
	TATION STRUCTURES					\$ 944,980		\$ 944,980		\$	1,889,960
4. MAJOR EQU											
4.1	345kV				200.000	4 500 000	4 00.000	d 540,000	4 200 000	_	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
4.1a	Circuit Breakers	8	EA .	\$	200,000	\$ 1,600,000		\$ 640,000	\$ 280,000		2,240,000
4.1b	Capacitor Banks	0	EA	\$		\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.1c	345 kV - 230 kV Auto Transformer	1	EA	\$	3,400,000	\$ 3,400,000	\$ 750,000	\$ 750,000	\$ 4,150,000	\$	4,150,000
4.1d	345 kV - 115 kV Auto Transformer	2	EA	\$	3,400,000	\$ 6,800,000	\$ 750,000	\$ 1,500,000	\$ 4,150,000	\$	8,300,000
4.2	230kV										
4.2a	Circuit Breakers	1	EA .	\$	115,000	\$ 115,000	\$ 80,000	\$ 80,000	\$ 195,000		195,000
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.3	115kV										
4.3a	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$	-
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$	-
	REQUIPTMENT					\$ 11,915,000		\$ 2,970,000		\$	14,885,000
	IPTMENT / MATERIALS										
5.1	345kV		F.		10.00=	ć 20.555	A 45.000	ć 20.055	A		4-0-00-
5.1a	Line Switches - 3ph w/ motor operator	2	EA	\$	40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$	110,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.1b	Disconnect Switches - 3ph w/ manual operator	17	EA	\$ 35,000	\$ 595,000	\$ 17,500	\$ 297,500	\$ 52,500	\$ 892,50
5.1c	VT'S	6	EA	\$ 25,000	\$ 150,000	\$ 12,000	\$ 72,000	\$ 37,000	\$ 222,00
5.1d	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,00
5.1e	CCVT'S	21	EA	\$ 13,000	\$ 273,000	\$ 8,000	\$ 168,000	\$ 21,000	\$ 441,00
5.1f	Arresters	15	EA	\$ 6,500	\$ 97,500	\$ 1,500	\$ 22,500	\$ 8,000	\$ 120,000
5.1g	Wave Traps	2	EA	\$ 13,000	\$ 26,000	\$ 8,000	\$ 16,000	\$ 21,000	\$ 42,00
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$ 250,00
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	1	EA	\$ 35,000	\$ 35,000	\$ 15,000	\$ 15,000	\$ 50,000	\$ 50,00
5.2b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 30,000	\$ 30,000	\$ 17,500	\$ 17,500	\$ 47,500	\$ 47,50
5.2c	VT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,00
5.2d	CT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,00
5.2e	CCVT'S	3	EA	\$ 10,000	\$ 30,000	\$ 6,000	\$ 18,000	\$ 16,000	\$ 48,00
5.2f	Arresters	6	EA	\$ 5,000	\$ 30,000	\$ 6,000	\$ 36,000	\$ 11,000	\$ 66,00
5.2g	Wave Traps	1	EA	\$ 13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,00
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	2	EA	\$ 33,000	\$ 66,000	\$ 15,000	\$ 30,000	\$ 48,000	\$ 96,00
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
5.3c	VT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,00
5.3d	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,00
5.3e	CCVT'S	2	EA	\$ 8,000	\$ 16,000	\$ 8,000	\$ 16,000	\$ 16,000	\$ 32,00
5.3f	Arresters	12	EA	\$ 3,420	\$ 41,040	\$ 6,000	\$ 72,000	\$ 9,420	\$ 113,04
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ 1,994,540		\$ 1,060,500		\$ 3,055,04
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ 975,000	\$ 975,000	\$ 170,000	\$ 170,000	\$ 1,145,000	\$ 1,145,00
6.2	Protection and Telecom Equipment Panels	29	EA	\$ 35,000	\$ 1,015,000	\$ 10,000	\$ 290,000	\$ 45,000	\$ 1,305,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,00
6.4	Control Cables	1	LS	\$ 472,500	\$ 472,500	\$ 472,500	\$ 472,500	\$ 945,000	\$ 945,00
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,00
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,00
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ 2,927,500		\$ 1,477,500		\$ 4,405,000
7.1	Conduit & Cable Trench System	1,950	LF	\$ 185.00	\$ 360,750	\$ 170.00	\$ 331,500	\$ 355	\$ 692,25
7.2	Rigid Bus, Fittings & Insulators	2,500	LF	\$ 125.07	\$ 312,675	\$ 237.10	\$ 592,750	\$ 362	\$ 905,42

Item	Item Description	Estimated Quantity	Unit of Measure	Material S	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
7.3	Strain Bus, Connectors & Insulators	2,000	LF	\$	39.30	\$ 78,600	\$ 53.35	\$ 106,700	\$ 93	\$	185,300
7.4	Grounding System	25,000	LF	\$	6.93	\$ 173,250	\$ 32.58	\$ 814,500	\$ 40	\$	987,750
7.5	Strain Bus Insulators - 345kV	48	EA	\$	2,000	\$ 96,000	\$ 1,050	\$ 50,400	\$ 3,050	\$	146,400
7.6	Strain Bus Insulators - 230kV	6	EA	\$	1,400	\$ 8,400	\$ 750	\$ 4,500	\$ 2,150	\$	12,900
7.7	Strain Bus Insulators - 115kV	12	EA	\$	1,000	\$ 12,000	\$ 550	\$ 6,600	\$ 1,550	\$	18,600
7.8	Low Voltage AC Station Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.9	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12											
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											-
7.20											-
TOTAL - MISC	ITEMS					\$ 1,441,675		\$ 2,331,950		\$	3,773,625
D. Rotte	rdam Substation - Install					\$ 24,563,589		\$ 19,164,885		\$	43,728,474
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 437,285	\$ 437,285	\$ 437,285	\$	437,285
	Project Management, Material Handling & Amenities										
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 2,346,426	\$ 2,346,426	\$ 2,346,426	\$	2,346,426
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 437,285	\$ 437,285	\$ 437,285	\$	437,285
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	_	\$ -	\$ 437,285	\$ 437,285	\$ 437,285	Ś	437,285
	Engineering			T		*	7 331,233	7,200	7 337,233	-	
8.5	Design Engineering	1	LS	\$	_	\$ -	\$ 3,498,278	\$ 3,498,278	\$ 3,498,278	\$	3,498,278
8.6	LiDAR		LS	\$	_	\$ -	\$ -	\$ -	\$ -	\$	
8.7	Geotech	4	EA	Ś	_	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	_	14,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 306,099	\$ 306,099	\$ 306,099	\$	306,099
0.0	Testing & Commissioning		Site	Ť		<u> </u>	Ţ 300,033	ψ 300,033	φ 300,033	+	
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	Ś	-	\$ -	\$ 1,093,212	\$ 1,093,212	\$ 1,093,212	Ś	1,093,212
0.5	Permitting and Additional Costs		2.5	Ť		<u> </u>	Ţ 1,030,E1E	Ţ 1,033,E1E	Ţ 1,030,E1E	1	1,030,212
8.10	Environmental Licensing & Permitting Costs	-	LS	Ś	-	\$ -	\$ -	Ś -	\$ -	s	
8.11	Environmental Mitigation	_	LS	Ś	-	\$ -	\$ -	\$ -	\$ -	Ś	
8.12	Warranties / LOC's	1	LS	\$	-	\$ - \$ -	\$ 131,185	\$ 131,185	\$ 131,185	\$	131,185
8.13	Real Estate Costs (New)		LS	Ś		\$ -	\$ 151,165	\$ 131,165	\$ 131,163	Ś	131,183
8.14	Real Estate Costs (Incumbent Utility)	1	LS	Ś	-	\$ -	\$ 247,500	\$ 247,500	\$ 247,500	<u> </u>	247,500
8.14	Legal Fees	1	LS	\$	-	\$ - \$ -	\$ 247,500	\$ 247,500	\$ 247,500	Ś	247,500
8.15		-	LS	\$ \$	-	\$ -	\$ -	\$ - \$ -	\$ - \$ -	Ś	
	Allowance for Funds Used During Construction (AFUDC)	-	-	\$	-	¥	*	\$ - \$ -	7	\$	
8.17	Colos Toy on Materials	-	LS	T		·	\$ - \$ -	\$ - \$ -	т	\$	1 065 097
8.18 8.19	Sales Tax on Materials Fees for permits, including roadway, railroad, building or other local permits	1	LS LS	\$	1,965,087	\$ 1,965,087 \$ -	\$ -	\$ -	\$ 1,965,087 \$ 43,728		1,965,087 43,728
			LO					1.5 45./28		1 3	43.728

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Estimate Revision: 5 Total: \$ 4,216,452

NAT & NYPA - T026 - (Segn	ent A, Base)		
	Supply	Installation	Total
E. Rotterdam Substation - Removal			
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	\$ 1,472,750	\$ 1,472,750
2. SUBSTATION FOUNDATIONS	\$ -	\$ 617,400	\$ 617,400
3. SUBSTATION STRUCTURES	\$ -	\$ 534,900	\$ 534,900
4. MAJOR EQUIPTMENT	\$ -	\$ 147,000	\$ 147,000
5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$ 169,500	\$ 169,500
6. CONTROL HOUSE / PANELS	\$ -	\$ 150,000	\$ 150,000
7. MISC ITEMS	\$ -	\$ 519,480	\$ 519,480
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -	\$ 605,422	\$ 605,422
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ -	\$ 4,216,452	\$ 4,216,452
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ -	\$ 4,216,452	\$ 4,216,452

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
E. Rotte	rdam Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	6.3	ACRES	\$ -	\$ -	\$ 203,000	\$ 1,268,750	\$ 203,000	\$ 1,268,750
1.2	Station stone within substation fence.	2,000	СУ	\$ -	\$ -	\$ 102	\$ 204,000	\$ 102	\$ 204,000
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ 1,472,750		\$ 1,472,750
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

E. Rotterdam Substation - Removal

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2	230kV								
2.2a	Circuit Breaker Foundations	9	EA	\$ -	\$ -	\$ 7,200	\$ 64,800	\$ 7,200	\$ 64,800
2.2b	Capacitor Bank Foundations Capacitor Bank Foundations	2	EA	\$ -	\$ -		\$ 64,000	\$ 32,000	-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	1	EA	\$ -	\$ -	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000
2.2d	Caisson DE Foundations (for DE A frame str stand alone) Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	
2.2e	Switch Stand Foundations	15	EA	\$ -	\$ -	\$ 5,200	\$ 78,000	\$ 5,200	\$ 78,000
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ 78,000	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g 2.2h	Bus Support 1 Ph Foundations	59	EA	\$ -	\$ -	\$ 2,400	\$ 141,600	\$ 2,400	\$ 141,600
	Instrument Transformer Stand Foundations	15	EA	\$ - \$ -	\$ -	\$ 2,400	\$ 36,000	\$ 2,400	\$ 36,000
2.2j 2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ - \$ -	\$ 2,400	\$ 36,000	\$ 2,400	\$ 14,400
2.2K 2.2m		0	EA		\$ - \$ -	, , , , , ,			\$ 14,400
	Wave Trap Stand Foundations			•		•		•	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	AAFIN								
2.3	115kV	0	EA.	Ć.	Ć.	Ć.	ć	¢.	
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	3	EA	\$ -	\$ -	\$ 5,200	\$ 15,600	\$ 5,200	\$ 15,600
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations				_	_	_	_	
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA .	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	3	EA	\$ -	\$ -	\$ 42,000	\$ 126,000	\$ 42,000	\$ 126,000
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad				_		_		
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightwing Most Foundations								
2.6a	Lightning Mast Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	70' Lightning Mast Foundation	_	EA	ļ ·			1		
2.6b		0		\$ -			\$ -		
2.6c		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION FOUNDATIONS				\$ -		\$ 617,400		\$ 617,400
	ON STRUCTURES						,,,,,,		,,,,,,
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	1	EA	\$ -	\$ -	\$ 27,000	\$ 27,000	\$ 27,000	\$ 27,000
3.2b	Substation A-Frame Structures - Shared Column	5	EA	\$ -	\$ -	\$ 27,000	\$ 135,000	\$ 27,000	\$ 135,000
3.2c	Switch Stands	15	EA	\$ -	\$ -	\$ 9,750	\$ 146,250	\$ 9,750	\$ 146,250
3.2d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2e	Bus Support 3ph	4	EA	\$ -	\$ -	\$ 2,250	\$ 9,000	\$ 2,250	\$ 9,000
3.2f	Bus Support 1 Ph	59	EA	\$ -	\$ -	\$ 2,250	\$ 132,750	\$ 2,250	\$ 132,750
3.2g	Instrument Transformer Stand	15	EA	\$ -	\$ -	\$ 1,050	\$ 15,750	\$ 1,050	\$ 15,750
3.2h	Arrester Stand	6	EA	\$ -	\$ -	\$ 1,050	\$ 6,300	\$ 1,050	\$ 6,300
3.2j	Wave Trap Stand	3	EA	\$ -	\$ -	\$ 4,500	\$ 13,500	\$ 4,500	\$ 13,500
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ 30,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	3	EA	\$ -	\$ -	\$ 6,450	\$ 19,350	\$ 6,450	\$ 19,350
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION STRUCTURES				\$ -		\$ 534,900		\$ 534,900
4. MAJOR EQU					*		7 33 1,533		7 00 ,,000
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	9	EA	\$ -	\$ -	\$ 7,000	\$ 63,000	\$ 7,000	\$ 63,000
4.2b	Capacitor Banks	2	EA	\$ -	\$ -	\$ 42,000	\$ 84,000	\$ 42,000	\$ 84,000
	· ·					,,,,,	. ,,,,,,,	,	
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				<u> </u>					
TOTAL - MAIO	DR EQUIPTMENT				\$ -		\$ 147,000		\$ 147,000
	IPTMENT / MATERIALS				,		7 147,000		Ţ 147,000
5.1	345kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,50
5.2b	Disconnect Switches - 3ph w/ manual operator	12	EA	\$ -	\$ -	\$ 5,500	\$ 66,000	\$ 5,500	\$ 66,00
5.2c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	8	EA	\$ -	\$ -	\$ 1,500	\$ 12,000	\$ 1,500	\$ 12,00
5.2f	Arresters	15	EA	\$ -	\$ -	\$ 2,500	\$ 37,500	\$ 2,500	\$ 37,50
5.2g	Wave Traps	3	EA	\$ -	\$ -	\$ 2,500	\$ 7,500	\$ 2,500	\$ 7,50
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j	Station Service Housionners	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2,		-	271	Ţ	<u> </u>	<u> </u>	Ÿ	<u> </u>	*
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,50
5.3c	VT'S	0	EA	\$ -	\$ -	\$ 3,300	\$ 10,300	\$ -	\$ -
				-		\$ -	\$ -	•	
5.3d 5.3e	ccvs's	0	EA EA	\$ -	\$ - \$ -	\$ -	\$ -	\$ - \$ -	\$ - \$ -
					\$ - \$ -		·	*	
5.3f	Arresters	9	EA		T	,	\$ 13,500	\$ 1,500	
5.3g	Wave Traps	0	EA	ļ *	\$ - \$ -	Ÿ	Ÿ	*	*
5.3h	Station Service Transformers	0	EA	\$ -	т	T	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 169,500		\$ 169,50
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,00
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ 150,000		\$ 150,00
7. MISC ITEMS									
7.1	Conduit & Cable Trench System	1	LS	\$ -	\$ -	\$ 42,000.00	\$ 42,000	\$ 42,000	\$ 42,00
7.2	Rigid Bus, Fittings & Insulators	3,200	LF	\$ -	\$ -	\$ 126.25	\$ 404,000	\$ 126	\$ 404,00

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & E Suppl	Equipment y Rate	Labor & Equipment Cost	Total Unit Rate	Т	TOTAL
7.3	Strain Bus, Connectors & Insulators	800	LF	\$ -	\$ -	\$	39.35	\$ 31,480	\$ 39	\$	31,480
7.4	Grounding System	1	LS	\$ -	\$ -	\$	42,000.00	\$ 42,000	\$ 42,000	\$	42,000
7.5											
7.6											
7.7											
7.8											
7.9											
7.10											
7.11											
7.12											
7.13											
7.14											
7.15											
TOTAL - MISC	ITEMS				\$ -			\$ 519,480		\$	519,480
E. Rotte	rdam Substation - Removal				\$ -			\$ 3,611,030		\$	3,611,030
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$	36,110	\$ 36,110	\$ 36,110	\$	36,110
	Project Management, Material Handling & Amenities										
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$	193,764	\$ 193,764	\$ 193,764	\$	193,764
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$	36,110	\$ 36,110	\$ 36,110	\$	36,110
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$	36,110	\$ 36,110	\$ 36,110	\$	36,110
	Engineering								•		
8.5	Design Engineering	1	LS	\$ -	\$ -	\$	288,882	\$ 288,882	\$ 288,882	\$	288,882
8.6	LIDAR	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
8.7	Geotech		EA	\$ -	\$ -	\$	3,500	\$ -	\$ 3,500	\$	-
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$	25,277	\$ -	\$ 25,277	\$	-
	Testing & Commissioning								•		
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$	90,276	\$ -	\$ 90,276	\$	-
	Permitting and Additional Costs								•		
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$	10,833	\$ 10,833	\$ 10,833	\$	10,833
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	<u> </u>
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
8.15	Legal Fees	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$		\$ -	\$ -	\$	-
8.17		_	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	Ś	-	\$ -	\$ -	\$	_
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$	3,611	\$ 3,611	\$ 3,611	-	3,611
	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -			\$ 605,422	, · · · · · · · · · · · · · · · · · · ·	Ś	605,422

NAT & NYPA - T026 - (Segment A, Base) Total: \$ 2,645,078

NAT & NYPA - TO2	?6 - (Segment A, I	Base)			
		Supply	Installation		Total
F. Edic Substation - Install					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,025	\$ 5,625	\$	7,650
2. SUBSTATION FOUNDATIONS	\$	100,098	\$ 107,200	\$	207,298
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$	88,800
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$	280,000
5. SMALL EQUIPTMENT / MATERIALS	\$	280,000	\$ 133,500	\$	413,500
6. CONTROL HOUSE / PANELS	\$	173,850	\$ 98,850	\$	272,700
7. MISC ITEMS	\$	339,357	\$ 507,880	\$	847,237
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	91,178	\$ 436,715	\$	527,893
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	1,230,908	\$ 1,414,170	\$	2,645,078
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	¢	1.230.908	\$ 1,414,170	Ġ	2.645.078

ption of	

Estimate Revision:

Item	item Description	Estimated Quantity	Unit of Measure	Material Suppl	ly Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
F. Edic S	ubstation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$	27	\$ 2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	0	LF	\$	100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4										
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
	 REP/ GRADING/ FENCING / CIVIL					\$ 2.025		\$ 5,625		\$ 7,650
	N FOUNDATIONS					\$ 2,023		3,023		7,030
	345kV									
2.1a	Circuit Breaker Foundations	1	EA	Ś :	14.940	\$ 14,940	\$ 16.000	\$ 16,000	\$ 30.940	\$ 30.940
2.1b	Capacitor Bank Foundations	0	EA	\$!	56,025	\$ -		\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$:	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	9	EA		4,482	\$ 40,338	, , , , , , , , , , , , , , , , , , , ,		\$ 9,282	
2.1k	Arrester Stand Foundations	3	EA		4,482	\$ 13,446		\$ 14,400	\$ 9,282	
2.1m	Wave Trap Stand Foundations	1	EA	+	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
2.2	230kV					_				
2.2a	Circuit Breaker Foundations	0	EA		11,952	•	\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA		44,820	·		\$ -	\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA		22,410	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA FA		22,410 3,735		\$ 24,000 \$ 4,000		\$ 46,410 \$ 7,735	
2.2e	Switch Stand Foundations	0	LA EA	>	3,/35		3 4,000	\$ -	ş /,/35	\$ -

2.2f Station Service Transformer Stand Foundation	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	5 7,735 5 7,735 6 7,735 7,735 7,735 6 10,829 6 69,615 6 34,034 6 34,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.2g Bus Support 3ph Foundations 0 EA S - S - S	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	5 7,735 5 7,735 6 7,735 6 7,735 7,735 6 10,829 6 69,615 6 34,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.2h Bus Support 1 Ph Foundations 0 EA S 3,735 S S 4,000 S	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	\$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 3,735 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.2k	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	5 7,735 6 7,735 6 7,735 6 10,829 6 69,615 6 34,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.2m Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - \$ \$ 4,000 \$ \$ 2.2h Misc. Structure Foundations 0 EA \$ - \$ 5 - \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	5 7,735 5 10,829 5 69,615 5 34,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.2n Misc. Structure Foundations 0 EA \$ - \$ - \$ - \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	\$ 10,829 \$ 69,615 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.2p	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	5 10,829 6 69,615 5 34,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.3 115kV 2.3a Circuit Breaker Foundations 0 EA \$ 5,229 \$ - \$ 5,600 \$ 2.3b Capacitor Bank Foundations 0 EA \$ 33,615 \$ - \$ 36,000 \$ 2.3c Caisson DE Foundations (for DE A frame str stand alone) 0 EA \$ 16,434 \$ - \$ 17,600 \$ 2.3d Caisson DE Foundations (for DE A frame str shared column) 0 EA \$ 16,434 \$ - \$ 17,600 \$ 2.3e Switch Stand Foundations 0 EA \$ 1,6434 \$ - \$ 17,600 \$ 2.3e Switch Stand Foundations 0 EA \$ 1,298 \$ - \$ 1,7600 \$ 2.3f Fuse Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ 2,988 \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	6 69,615 34,034 3 4,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.3a Circuit Breaker Foundations 0 EA \$ 5,229 \$ - \$ 5,600 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	6 69,615 34,034 3 4,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.3a Circuit Breaker Foundations 0 EA \$ 5,229 \$ - \$ 5,600 \$ \$ 2.3b Capacitor Bank Foundations 0 EA \$ 33,615 \$ - \$ 36,000 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	6 69,615 34,034 3 4,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.3b Capacitor Bank Foundations 0 EA \$ 33,615 \$ - \$ 36,000 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	6 69,615 34,034 3 4,034 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.3c Caisson DE Foundations (for DE A frame str stand alone) 0 EA \$ 16,434 \$ - \$ 17,600 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	34,034 34,034 5 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.3d Caisson DE Foundations (for DE A frame str shared column) 0 EA \$ 16,434 \$ - \$ 17,600 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	34,034 6,188 6,188 6,188 6,188 6,188 6,188 6,188 6,188 6,188	\$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.3e Switch Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ - \$ - \$ -
2.3f Fuse Stand Foundations 0 EA S 2,988 S - S 3,200 S	- \$ - \$ - \$ - \$ - \$ - \$	6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ -
2.3g Bus Support 3ph Foundations 0 EA S 2,988 S - S 3,200 S 2.3h Bus Support 1 Ph Foundations 0 EA S 2,988 S - S 3,200 S 2.3j Instrument Transformer Stand Foundations 0 EA S 2,988 S - S 3,200 S 2.3k Arrester Stand Foundations 0 EA S 2,988 S - S 3,200 S 2.3m Wave Trap Stand Foundations 0 EA S 2,988 S - S 3,200 S 2.3m Wave Trap Stand Foundations 0 EA S 2,988 S - S 3,200 S 2.3n Station Service Foundations 0 EA S - S - S - S 2.3p Misc. Structure Foundations 0 EA S - S - S 2.3p Misc. Structure Foundations 0 EA S - S - S 2.4d Transformer Foundation Transformer Foundation w/ Oil Containment 0 EA S 97,110 S - S 104,000 S 2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA S 74,700 S - S 80,000 S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA S - S - S - S 2.4c 230kV-115kV Transformer Foun	- \$ - \$ - \$ - \$ - \$ - \$	6 6,188 6 6,188 6 6,188 6 6,188 6 6,188 6 6,188	\$ - \$ - \$ - \$ -
2.3h Bus Support 1 Ph Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ 2.3j Instrument Transformer Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ 2.3k Arrester Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ 2.3m Wave Trap Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ 2.3m Station Service Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ 2.3p Misc. Structure Foundations 0 EA \$ - \$ - \$ - \$ - \$ 2.3p Misc. Structure Foundations 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- \$ - \$ - \$ - \$ - \$	6,188 6,188 6,188 6,188 6,188	\$ - \$ - \$
2.3j Instrument Transformer Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$	6,188 6,188 6,188 6,188	\$ - \$ -
2.3k Arrester Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ 2.3m Wave Trap Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ 2.3n Station Service Foundations 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <td< td=""><td>- \$ - \$ - \$</td><td>6,188 6,188 5 -</td><td>\$ -</td></td<>	- \$ - \$ - \$	6,188 6,188 5 -	\$ -
2.3m Wave Trap Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$	6,188	
2.3n Station Service Foundations 0 EA \$ -	- \$	-	Ş -
2.3p Misc. Structure Foundations 0 EA \$ - \$ - \$ - \$ 2.4 Transformer Foundations 0 EA \$ 97,110 \$ - \$ 104,000 \$ 2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ 74,700 \$ - \$ 80,000 \$ 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$			<u> </u>
2.4 Transformer Foundations	- \$		\$ -
2.4a 345-230kV Transformer Foundation w/ Oil Containment 0 EA \$ 97,110 \$ - \$ 104,000 \$ 2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ 74,700 \$ - \$ 80,000 \$ 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ - \$		-	\$ -
2.4a 345-230kV Transformer Foundation w/ Oil Containment 0 EA \$ 97,110 \$ - \$ 104,000 \$ 2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ 74,700 \$ - \$ 80,000 \$ 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ - \$			
2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ 74,700 \$ - \$ 80,000 \$ 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ - \$		* 201.110	A
2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$	- \$	· · · · · · · · · · · · · · · · · · ·	
	- \$,	\$ -
2.4d 115kV-69kV Transformer Foundation Wy Oil Containment U EA \$ - \$ - \$	- \$ - \$		\$ -
	- \$	-	\$ -
2.5 Control House Foundations / Pad			
2.5a Control House / Pad 0 EA \$ 76,194 \$ - \$ 81,600 \$	- \$	5 157,794	\$ -
2.5a Control nouser / rau 0 EA \$ 170,154 3 - 3 63,000 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$	- \$		
2.50 Centration of Contraction		33,000	7
2.6 Lightning Mast Foundations			
2.6a 70° Lightning Mast Foundation 0 EA \$ 5,229 \$ - \$ 5,600 \$	- \$	10,829	\$ -
2.6b 60'tightning Mast Foundation 0 EA \$ - \$ - \$ - \$	- \$		\$ -
2.6c 50' Lightning Mast Foundation 0 EA \$ - \$ - \$ - \$	- \$		\$ -
TOTAL - SUBSTATION FOUNDATIONS \$ 100,098 \$	107,200		\$ 207,298
3. SUBSTATION STRUCTURES			
3.1 345kV			
3.1a Substation A-Frame Structures - Stand alone 0 EA \$ 37,000 \$ - \$ 37,000 \$	- \$	74,000	\$ -
3.1b Substation A-Frame Structures - Shared Column 0 EA \$ 37,000 \$ - \$ 37,000 \$	- \$		
3.1c Switch Stands 1 EA \$ 14,800 \$ 14,800 \$ 14,800 \$	14,800 \$		\$ 29,600
3.1d Station Service Transformer Stand 0 EA \$ 14,800 \$ - \$ 14,800 \$	- \$	29,600	\$ -
3.1e Bus Support 3ph 0 EA \$ - \$ - \$ - \$	- \$	-	\$ -
3.1f Bus Support 1 Ph 0 EA \$ 3,700 \$ - \$ 3,700 \$	- \$	7,400	\$ -
3.1g Instrument Transformer Stand 9 EA \$ 1,850 \$ 16,650 \$ 1,850 \$	16,650 \$	3,700	\$ 33,300
3.1h Arrester Stand 3 EA \$ 1,850 \$ 5,550 \$ 1,850 \$	5,550 \$	3,700	\$ 11,100
3.1j Wave Trap Stand 1 EA \$ 7,400 \$ 7,400 \$ 7,400 \$	7,400 \$		\$ 14,800
3.1k Misc. Structures 0 EA \$ 6,475 \$ - \$ 6,475 \$	- \$	12,950	\$ -
3.2 230kV			
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 33,300 \$	- \$		
3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ 33,300 \$	- \$		
3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$	- \$		
3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$	- \$		
3.2e Bus Support 3ph 0 EA \$ - \$ - \$	- \$		
3.2f Bus Support 1 Ph 0 EA \$ 2,775 \$ - \$ 2,775 \$	- \$		
3.2g Instrument Transformer Stand	- \$		
	- \$		
3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$			
	- \$ - \$	12,950	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500		\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0		\$ 7,955		\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7,955			\$ -	\$ 15,910	
3.3e	Bus Support 3ph	0		\$ 3,330		\$ 3,330	\$ -	\$ 6,660	
3.3f	Bus Support 1 Ph	0		\$ 1,850		\$ 1,850		\$ 3,700	
3.3g	Instrument Transformer Stand	0		\$ 740		\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$ 740		\$ 740		\$ 1,480	
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
TOTAL - SUBST	ATION STRUCTURES				\$ 44,400		\$ 44,400		\$ 88,800
4. MAJOR EQU	IPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	1	EA	\$ 200,000	\$ 200,000	\$ 80,000	\$ 80,000	\$ 280,000	\$ 280,000
4.1b	Capacitor Banks	0		\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
	R EQUIPTMENT				\$ 200,000		\$ 80,000		\$ 280,000
	PTMENT / MATERIALS								
	345kV								
5.1a	Line Switches - 3ph w/ motor operator	1		\$ 40,000				\$ 55,000	
5.1b	Disconnect Switches - 3ph w/ manual operator	1		\$ 35,000		\$ 17,500		\$ 52,500	
5.1c	VT'S	3		\$ 25,000		\$ 12,000	\$ 36,000	\$ 37,000	\$ 111,000
5.1d	CT'S	3	EA	\$ 13,000				\$ 21,000	
5.1e	CCVT'S	3	EA	\$ 13,000		\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1f	Arresters	6		\$ 6,500			\$ 9,000	\$ 8,000	\$ 48,000
5.1g	Wave Traps	1	EA	\$ 13,000		\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j									
5.2	230kV	<u> </u>							
5.2a	Line Switches - 3ph w/ motor operator	0		\$ 35,000		\$ 15,000		\$ 50,000	
5.2b	Disconnect Switches - 3ph w/ manual operator	0		\$ 30,000		\$ 17,500		\$ 47,500	
5.2c	VT'S	0		\$ 13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0		\$ 13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$ 10,000		\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0		\$ 5,000		\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0		\$ 13,000				\$ 21,000	
5.2h	Station Service Transformers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AATIM.								
5.3	115kV		F.*	6 22	6	ć	<u>^</u>	¢	^
	Line Switches - 3ph w/ motor operator	0		\$ 33,000		\$ 15,000	\$ -	\$ 48,000	
	Disconnect Switches - 3ph w/ manual operator	0		\$ 28,000		\$ 17,500		\$ 45,500	
	VT'S	0		\$ 13,000		\$ 8,000		\$ 21,000	
	CT'S	0		\$ 13,000		\$ 8,000		\$ 21,000	
	CCVT'S	0		\$ 8,000		\$ 8,000		\$ 16,000	
	Arresters	0		\$ 3,420		\$ 6,000		\$ 9,420	
5.3g	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
	Station Service Transformers	0		\$ -	\$ -		\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL COSC	FOUNDTMENT / MATERIAL C				¢ 200.555		ć 100 FTT		d
TOTAL - SMALL	EQUIPTMENT / MATERIALS				\$ 280,000		\$ 133,500		\$ 413,500

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6. CONTROL HO	DUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0	EA	\$ 551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$ -
	Protection and Telecom Equipment Panels	3	EA	\$ 35,000	\$ 105,000	\$ 10,000	\$ 30,000		\$ 135,000
6.3	125VDC Batteries	0	EA	\$ 75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
6.4	Control Cables	1	LS	\$ 68,850	\$ 68,850		\$ 68,850	\$ 137,700	\$ 137,700
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
	DC Distribution System	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
	Security	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
	Fire Alarm	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
	Generator	0	EA	\$ 100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
TOTAL - CONTR	ROL HOUSE / PANELS / GENERATOR				\$ 173,850		\$ 98,850		\$ 272,700
7. MISC ITEMS									
7.1	Conduit & Cable Trench System	800	LF	\$ 185.00	\$ 148,000	\$ 170.00	\$ 136,000	\$ 355	\$ 284,000
	Rigid Bus, Fittings & Insulators	0	L.S.	\$ 75,042.00	\$ -	\$ 142,260.00	\$ -	\$ 217,302	\$ -
					ć 00.350				
7.3	Strain Bus, Connectors & Insulators	2,500	LF	\$ 39.30	\$ 98,250	\$ 53.35	\$ 133,375	\$ 93	\$ 231,625
7.4	Grounding System	1	L.S.	\$ 10,395.00	\$ 10,395	\$ 73,305.00	\$ 73,305	\$ 83,700	\$ 83,700
7.5	Strain Bus Insulators - 345kV	24	EA	\$ 2,000	\$ 48,000	\$ 1,050	\$ 25,200	\$ 3,050	\$ 73,200
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$ -
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$ -
7.8	Low Voltage AC Station Service	0	LS	\$ 50,000	\$ -	\$ 75,000	\$ -	\$ 125,000	\$ -
7.9	SSVT Service	0	LS	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	\$ -
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 14,000	\$ 14,000	\$ 70,000	\$ 70,000	\$ 84,000	\$ 84,000
	Misc. Materials (Above and Below Ground)	1	LS	\$ 20,712	\$ 20,712	\$ 70,000	\$ 70,000	\$ 90,712	\$ 90,712
7.12	,			,	,	,			
7.13									
7.14									
7.15									
7.16									
7.17									
7.18									
7.19									
7.20									
7.21									
7.22									
7.23									
7.24									
7.25									
TOTAL - MISC	TEMS				\$ 339,357		\$ 507,880		\$ 847,237
E Edic Si	ıbstation - Install				\$ 1,139,730		\$ 977,455		\$ 2,117,185
					ÿ 1,133,730		\$ 377,433		ÿ 2,117,103
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization		1.6	ć	^	ć 24.472	ć 24.472	ć 24.472	ć 24.472
	Mob / Demob	1	LS	\$ -	\$ -	\$ 21,172	\$ 21,172	\$ 21,172	\$ 21,172
—	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	_							
	and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 113,606	\$ 113,606	\$ 113,606	\$ 113,606
			1.5		<u>^</u>	6 24.172	6 24.470	ć 24.470	ć 24.550
	Utility PM and Project Oversite	1	LS	ć	\$ -	\$ 21,172	\$ 21,172	\$ 21,172	
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 21,172	\$ 21,172	\$ 21,172	\$ 21,172
	Engineering Posign Fagineering		1.0	ć	ć	ć 460.275	ć 400.375	ć 400.075	ć 400.3==
	Design Engineering	1	LS	\$ -	\$ -	\$ 169,375	ć	ć	
	LiDAR	-	LS	\$ -			\$ -		\$ -
	Geotech	4	EA	\$ -		\$ 3,500			
	Surveying/Staking	1	Site	\$ -	\$ -	\$ 14,820	\$ 14,820	\$ 14,820	\$ 14,820
	Testing & Commissioning		1.6	ć	ć	ć F2 020	ć F2 020	ć F2.020	ć F2.020
	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 52,930	\$ 52,930	\$ 52,930	\$ 52,930
	Permitting and Additional Costs		1.0	ć	ć	ć	ć	ć	¢
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -			\$ -	
	Environmental Mitigation	-	LS	\$ -			\$ -		\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -				
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.14	Real Estate Costs (Incumbent Utility)		LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 9	1,178	\$ 91,178	\$ -	\$ -	\$ 91,178	\$ 91,178
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 2,117	\$ 2,117	\$ 2,117	\$ 2,117
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 91,178		\$ 436,715		\$ 527,893

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NAT & NYPA - T026 - (Segment A, Base) Total: \$ 41,708

NAT & NYPA - T026 - (Segn	nent A, Base)			
	Supply		Installation	Total
G. Edic Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -		; -	\$ -
2. SUBSTATION FOUNDATIONS	\$ -		\$ 14,000	\$ 14,000
3. SUBSTATION STRUCTURES	\$ -		6,750	\$ 6,750
4. MAJOR EQUIPTMENT	\$ -		; -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$ -		4,500	\$ 4,500
6. CONTROL HOUSE / PANELS	\$ -		; -	\$ -
7. MISC ITEMS	\$ -		; -	\$ 10,500
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -		5,958	\$ 5,958
CONTRACTOR MARK-UP (OH&P)	\$ -	. ;	; -	\$ -
SUBTOTAL:	\$ -		\$ 31,208	\$ 41,708
CONTINGENCY ON ENTIRE PROJECT	\$ -	. ,	; -	\$ -
TOTAL:	\$ -		\$ 31,208	\$ 41,708

ì	escri	ntion	of W	ork.
	CJCII	puon	U	O. K.

Estimate Revision:

5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
G. Edic S	ubstation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.			\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence			\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									1
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	NFOUNDATIONS								
	345kV								
	Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 14,000	· · · · · · · · · · · · · · · · · · ·	\$ 14,000	
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400		\$ 2,400	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	-	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	Ś -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000		\$ 22,000	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ 11,000		\$ 11,000	
2.2e	Switch Stand Foundations	0	EA	š -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				1 *	7	7	T	7	

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	and to								
	115kV	0	ГА	\$ -	\$ -	\$ -	Š -	\$ -	\$ -
	Circuit Breaker Foundations	0	EA EA		<u> </u>				-
	Capacitor Bank Foundations Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stand Foundations	0	EA	\$ -	\$ -		\$ -	\$ 5,200	
	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Control House Foundations / Pad								
2.5a	Control House / Pad	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lightning Mast Foundations						A	A	A
	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b 2.6c		0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.00		U	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	ATION FOUNDATIONS				\$ -		\$ 14,000		\$ 14,000
3. SUBSTATION					, -		7 14,000		3 14,000
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Station Service Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	3	EA	\$ -	\$ -	\$ 2,250	\$ 6,750	•	\$ 6,750
	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	230kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -		\$ -	\$ 27,000	
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ 27,000		\$ 27,000	
	Switch Stands	0		\$ -	\$ -			\$ 9,750	
	Station Service Transformer Stand	0		\$ -			\$ -	\$ -	
	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 1 Ph	0		\$ -		\$ 2,250		\$ 2,250	
	Instrument Transformer Stand	0		\$ -		\$ 1,050		\$ 1,050	
	Arrester Stand	0		\$ -	\$ -			\$ 1,050	
	Wave Trap Stand	0		\$ -	\$ -	\$ 4,500		\$ 4,500	
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	44FlA/								
3.3	115kV								D 20 - f (0

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION STRUCTURES				\$ -		\$ 6,750		\$ 6,750
4. MAJOR EQU									
	345kV								
	Circuit Breakers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
	115kV								
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	R EQUIPTMENT				\$ -		\$ -		\$ -
	PTMENT / MATERIALS								
	345kV								
	Line Switches - 3ph w/ motor operator	0		\$ -			\$ -	\$ 5,500	
	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500		\$ 5,500	
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Arresters	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	
	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.1h	Station Service Transformers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	230kV				A	A 5.500	A	4 5.500	A
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	
	Arresters	0		\$ -	\$ - \$ -	\$ 2,500	\$ -	\$ 2,500	
	Wave Traps	0	EA	\$ -	т	\$ 2,500	\$ -	\$ 2,500	
	Station Service Transformers	0	EA FA	\$ -	\$ - \$ -	\$ -	\$ -	\$ - \$ -	\$ -
5.2j		0	EA	\$ -	· -	\$ -	\$ -	\$ -	\$ -
E 2	115kV								
		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3a 5.3b	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0	EA EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	-
	VT'S	0	EA EA	\$ -	\$ -	\$ 5,500	\$ -		\$ -
	VTS	0		•	\$ -		\$ -		\$ -
	CCVT'S	0		\$ -	\$ -		\$ -		\$ -
	Arresters	0		\$ -	\$ -			\$ 1,500	
	Wave Traps	0		\$ -			\$ -		\$ -
	Station Service Transformers	0		\$ -			\$ -		\$ -
	Fuses	0		\$ -		\$ -	\$ -		\$ -
J.3J	1 4353	U	EA	-	-	-	- ب	- ب	-
TOTAL - SMALL	EQUIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
	DUSE / PANELS / GENERATOR				-		4,300		4,300
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
U.1	5511115211533E	0	L	1 7	1 *	7 130,000	~	y 130,000	D2060

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.10	ocheruto.		L/ (·	· ·	·	Υ	Υ	*
TOTAL - CONTR	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS	(CETIOODE, FAMILEO, CETIENTON				Ÿ		Ų.		7
	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
		1			\$ -				
	Rigid Bus, Fittings & Insulators		LS EA				\$ 10,500	\$ 10,500	
	Strain Bus, Connectors & Insulators	0		\$ -	7		\$ -	\$ 39	
	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 10,500		\$ 10,500
G. Edic Sı	ubstation - Removal				\$ -		\$ 35,750		\$ 35,750
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 358	\$ 358	\$ 358	\$ 358
	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 1,918	\$ 1,918	\$ 1,918	\$ 1,918
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 358	\$ 358	\$ 358	\$ 358
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 358	\$ 358	\$ 358	\$ 358
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 2,860	\$ 2,860	\$ 2,860	\$ 2,860
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Surveying/Staking	-	Site	\$ -	\$ -	\$ 250	\$ -	\$ 250	\$ -
	Testing & Commissioning							•	
	Testing & Commissioning of T-Line and Equipment	_	LS	\$ -	\$ -	\$ 894	\$ -	\$ 894	\$ -
	Permitting and Additional Costs			7	T	7	T	7	T
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	_	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -		\$ 107	\$ 107	\$ 107
	Real Estate Costs (New)	-	LS	\$ -	\$ -		\$ -		\$ -
					<u>'</u>				
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -		\$ -	
	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 36	\$ -	\$ 36	
$\overline{}$	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				- ا		\$ 5,958		\$ 5,958

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H. New Scotland Substation - Install

Estimate Revision: 5 Total: \$ 6,456,780

NAT & NYPA - T026 - (Segn	nent A,	Base)		
		Supply	Installation	Total
H. New Scotland Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	4,050	\$ 11,250	\$ 15,300
2. SUBSTATION FOUNDATIONS	\$	406,368	\$ 435,200	\$ 841,568
3. SUBSTATION STRUCTURES	\$	199,800	\$ 199,800	\$ 399,600
4. MAJOR EQUIPTMENT	\$	600,000	\$ 240,000	\$ 840,000
5. SMALL EQUIPTMENT / MATERIALS	\$	353,000	\$ 192,500	\$ 545,500
6. CONTROL HOUSE / PANELS	\$	726,650	\$ 500,400	\$ 1,227,050
7. MISC ITEMS	\$	525,680	\$ 788,055	\$ 1,313,735
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	225,244	\$ 1,048,783	\$ 1,274,027
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	3,040,792	\$ 3,415,988	\$ 6,456,780
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	3,040,792	\$ 3,415,988	6,456,780

		-	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	*	OTAL
	Scotland Substation - Install										
1. SITE PREP/	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$	-
1.2	Station stone within substation fence.	150	CY	\$	27	\$ 4,050	\$ 75	\$ 11,250	\$ 102	\$	15,300
1.3	Substation Fence	0	LF	\$	100	\$ -	\$ 100	\$ -	\$ 200	\$	-
1.4	Permanent Access Road - 20'-Wide (From Gordon RD)	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$	-
1.5											
1.6											
1.7											
1.8											
1.9											
1.10											
1.11											
1.12											
1.13											
1.14											
1.15											
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 4,050		\$ 11,250		\$	15,300
	FOUNDATIONS										
2.1	345kV										
2.1a	Circuit Breaker Foundations	3	EA	\$	14,940	\$ 44,820	\$ 16,000	\$ 48,000	\$ 30,940	\$	92,820
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$	-
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$	26,145	\$ 104,580	\$ 28,000	\$ 112,000	\$ 54,145	\$	216,580
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$	-
2.1e	Switch Stand Foundations	24	EA	\$	4,482	\$ 107,568	\$ 4,800	\$ 115,200	\$ 9,282	\$	222,768
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	
2.1h	Bus Support 1 Ph Foundations	15	EA	\$	4,482	\$ 67,230	\$ 4,800	\$ 72,000	\$ 9,282	\$	139,230
2.1j	Instrument Transformer Stand Foundations	12	EA	\$	4,482	\$ 53,784	\$ 4,800	\$ 57,600	\$ 9,282	\$	111,384
2.1k	Arrester Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$	27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$	9,282
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1p											
				\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.2	230kV										
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$	-
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$	-
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000		\$ 46,410	\$	-
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$	-
	Switch Stand Foundations	0	EA	\$	3,735		\$ 4,000		\$ 7,735		
	Station Service Transformer Stand Foundation	0	EA	\$	3,735	\$ -		\$ -	\$ 7,735		
	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	_
	Bus Support 1 Ph Foundations	0	EA	Ś	3,735	\$ -		\$ -	\$ 7,735		-

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000		\$ 7,735	
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.2	aspla:								
2.3 2.3a	115kV Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3a 2.3b	Capacitor Bank Foundations	0	EA EA	\$ 33,615	\$ -	\$ 36,000	\$ - \$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000		\$ 154,700	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ -	\$ - \$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	U	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.50	Contract Foundation		271	7 10,000	<u> </u>	7 27,000	Ť	\$ 55,000	*
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	2	EA	\$ 5,229	\$ 10,458	\$ 5,600	\$ 11,200	\$ 10,829	\$ 21,658
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ 406,368		\$ 435,200		\$ 841,568
	N STRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	1	EA	\$ 37,000	\$ 37,000		\$ 37,000	\$ 74,000	
3.1b 3.1c	Substation A-Frame Structures - Shared Column Switch Stands	0 4	EA EA	\$ 37,000 \$ 14,800	\$ - \$ 59,200	\$ 37,000 \$ 14,800	\$ - \$ 59,200	\$ 74,000 \$ 29,600	\$ - \$ 118,400
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ 39,200	\$ 14,800	\$ 39,200	\$ 29,600	\$ -
3.1e	Bus Support 3ph	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,000	\$ -
3.1f	Bus Support 1 Ph	15	EA	\$ 3,700	\$ 55,500		\$ 55,500	\$ 7,400	
3.1g	Instrument Transformer Stand	12	EA	\$ 1,850	\$ 22,200		\$ 22,200	\$ 3,700	
3.1h	Arrester Stand	3	EA	\$ 1,850	\$ 5,550			\$ 3,700	
3.1j	Wave Trap Stand	1	EA	\$ 7,400	\$ 7,400	\$ 7,400	\$ 7,400	\$ 14,800	\$ 14,800
3.1k	Lightning Masts - 70'	2	EA	\$ 6,475	\$ 12,950				
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	
3.2c	Switch Stands	0	EA	· · · · · · · · · · · · · · · · · · ·		\$ 12,025		\$ 24,050	
3.2d	Station Service Transformer Stand	0						\$ 24,050	
3.2e	Bus Support 3ph	0		\$ -			\$ -		\$ -
3.2f	Bus Support 1 Ph	0						\$ 5,550	
3.2g	Instrument Transformer Stand	0		, , , , , , , , , , , , , , , , , , , ,		\$ 1,295		\$ 2,590	
3.2h	Arrester Stand	0	EA EA	\$ 1,295 \$ 5,550		\$ 1,295		\$ 2,590 \$ 11,100	
3.2j 3.2k	Wave Trap Stand Misc. Structures	0	EA EA	\$ 5,550 \$ 6,475	\$ - \$ -	\$ 5,550 \$ 6,475		\$ 11,100 \$ 12,950	
3.2K	INIDO. DEL GOLGIES	0	EA	, 0,4/5	-	0,4/5	- ب	12,950 ب	-
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
5.50	1		- Ln	10,500		10,300	7	- 57,000	

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$	3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$	1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$	740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$	740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$	3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
TOTAL - SUBST	ATION STRUCTURES					\$ 199,800		\$ 199,800		\$ 399,600
4. MAJOR EQU	IPTMENT									
4.1	345kV									
4.1a	Circuit Breakers	3	EA	\$	200,000	\$ 600,000	\$ 80,000	\$ 240,000	\$ 280,000	\$ 840,000
4.1b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
	345 kV - 115 kV Auto Transformer	0		\$		\$ -	\$ 750,000	\$ -	\$ 750,000	
	230kV									
	Circuit Breakers	0	EA	\$	115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
	Capacitor Banks	0		\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
				1			. 22,200		. 22,200	•
4.3	115kV									
	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
	Capacitor Banks	0		\$	-	\$ -		Š -	\$ 60,000	
4.30	Capacitor banks	- 0	LA	7	_	· -	\$ 00,000	· -	Ç 00,000	-
TOTAL MAJOR	R EQUIPTMENT					\$ 600,000		\$ 240,000		\$ 840,000
	•					\$ 600,000		\$ 240,000		\$ 840,000
	PTMENT / MATERIALS									
	345kV		F.4		40.000	40.000	45.000	45.000	d 55,000	4
	Line Switches - 3ph w/ motor operator	1	EA	\$	40,000		\$ 15,000		\$ 55,000	\$ 55,000
	Disconnect Switches - 3ph w/ manual operator	3		\$	35,000			. , , ,	\$ 52,500	\$ 157,500
	VT'S	3	EA	\$	13,000				\$ 25,000	\$ 75,000
	CT'S	3		\$	13,000				\$ 21,000	· /
	CCVT'S	6		\$	13,000				\$ 21,000	
	Arresters	6		\$	6,500	,	\$ 1,500	\$ 9,000	\$ 8,000	\$ 48,000
	Wave Traps	1	EA	\$	13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
	Station Service Transformers	0		\$	200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j		0	EA	\$	15,000	\$ -	\$ 7,500	\$ -	\$ 22,500	\$ -
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$	35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$	10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$	5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j		0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
				T .					·	•
5.3	115kV									
	Line Switches - 3ph w/ motor operator	0	EA	\$	33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	Ś	28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
	VT'S	0		\$	13,000	Ÿ	\$ 8,000	\$ -	\$ 21,000	\$ -
	CT'S	0	EA	\$	13,000			\$ -	\$ 21,000	•
	CCVT'S	0		\$	8,000		\$ 8,000		\$ 16,000	
	Arresters	0		\$	3,420		\$ 6,000		\$ 9,420	
	Wave Traps	0		\$	- 3,420		\$ 0,000		\$ 5,420	
	Station Service Transformers	0		\$						\$ -
		0		\$						\$ -
5.3j	Fuses	U	EA	12	-	· -	\$ -	\$ -	\$ -	· -
TOTAL CRACE	FOUNDTMENT / MATERIALS					ć 252.000		ć 403.500		\$ 545.500
	EQUIPTMENT / MATERIALS					\$ 353,000		\$ 192,500		\$ 545,500
	DUSE / PANELS / GENERATOR CONTROL HOUSE	1	EA	\$	243,750	\$ 243,750	\$ 42,500	\$ 42,500	\$ 286,250	\$ 286,250
6.1										

\$1 \$200C Interview \$ \$ \$ \$ \$ \$ \$ \$ \$	Item	Item Description	Estimated Quantity	Unit of Measure	Mat	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
		Protection and Telecom Equipment Panels	5			35,000	\$ 175,000		\$ 50,000	·	
Section of Communications		125VDC Batteries	0		<u> </u>		_		\$ -	1,	<u> </u>
Dec Dec Control Process Section 1	6.4	Control Cables	1	LS		207,900	\$ 207,900	\$ 207,900	\$ 207,900	\$ 415,800	\$ 415,800
1							т	т	'		
E.S. Security O FA S 7,000 S S 5,000 S S 1,000 S S 1,000 S S S S S S S S S											
Fig. Fig. Alams							\$ 50,000				
Section Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Co	6.8	Security	0				\$ -		\$ -		\$ -
TOTAL - CONTROL HOUSE / PARKET GENERATOR 1	6.9	Fire Alarm	0	EA		7,500	\$ -	\$ 7,500	\$ -		\$ -
2.	6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
2.											
2.1 Concide & California Continue 1 1.5 5 55,000 5 75,000 5 11,000 5 11,000 5 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,200 12,20							\$ 726,650		\$ 500,400		\$ 1,227,050
1											
7.7 Strain Haw, Commence & Institutions 1 L.5. \$ 92,2500 \$ 9,222 \$ 114,1500 \$ 114,135 \$ 200,358 \$ 306 \$ 14,415 \$ 200,258 \$ 306 \$ 14,415 \$ 200,258 \$ 306 \$ 14,415 \$ 200,258 \$ 306 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$ 200,258 \$		•									
1											
7.7		Strain Bus, Connectors & Insulators	1				\$ 92,250				
Total Strain files includition - 278507		Grounding System	1								\$ 59,265
7.7 Strain Past Institution 1.1547 0 EA 5 1,000 5 5 5 5 1,150 5											
7.9	7.6	Strain Bus Insulators - 230kV	0				\$ -		\$ -	\$ 2,150	\$ -
7-9 SVT-Service	7.7	Strain Bus Insulators - 115kV	0	EA		1,000	\$ -	\$ 550	\$ -		•
2.10	7.8	Low Voltage AC Station Service	0	LS	\$	50,000	\$ -	\$ 75,000	\$ -	\$ 125,000	\$ -
7.11 Minc. Maternisk, (Apove and deltow crownod) 1 IS \$ 180,000 \$ 180,000 \$ 380,000 \$ 380,000 \$ 380,000 \$ 7,12 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1,131 \$ 1	7.9	SSVT Service	0	LS	\$	45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	\$ -
Total Install new communication tower 1 IS S S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000 S 75,000	7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$ 250,000
7.13	7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$ 360,000
7.14	7.12	Install new communication tower foundation.	1	LS			\$ -	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
7.14	7.13	Relocate exiting communication tower.	1	LS			\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
7.16	7.14										
7.17	7.15										
7.18	7.16										
7.19	7.17										
7.20	7.18										
7.21	7.19										
7.22 7.23 7.24 7.25 7.27 7.27 7.28 7.28 7.29 7.29 7.29 7.29 7.29 7.29 7.29 7.29	7.20										
7.22 7.23 7.24 7.25 7.27 7.28 7.28 7.29 7.29 7.29 7.29 7.29 7.29 7.29 7.29	7.21										
T.24											
T.24	7.23										
New Scotland Substation - Install	7.24										
H. New Scotland Substation - Install	7.25										
Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample S	TOTAL - MISC	ITEMS					\$ 525,680		\$ 788,055		\$ 1,313,735
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization / De	LI Now C	cotland Cubstation Install					¢ 2.01E.E40		¢ 2.267.20E		
Contactor Mobilization / Demobilization							\$ 2,013,346		3 2,307,203		\$ 3,102,733
8.1 Mob / Demob 1 LS S - S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,828 S 51,	8. MOB/DEMO										
Project Management, Material Handling & Amenities					+						
R.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) LS S 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,101 \$ 278,1	8.1		1	LS	\$	-	\$ -	\$ 51,828	\$ 51,828	\$ 51,828	\$ 51,828
8.2 and Cost Manager, SHEQ Staff, and Admin Staff)		Project Management, Material Handling & Amenities									
Site Accommodation, Facilities, Storage	8.2		1	LS				\$ 278,101	\$ 278,101	\$ 278,101	\$ 278,101
Site Accommodation, Facilities, Storage	8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 51.828	\$ 51.828	\$ 51.828	\$ 51,828
Engineering					\$	-					
8.5 Design Engineering 1 LS \$ - \$ - \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,620 \$ 414,62					+				, , , , , , , , , , , , , , , , , , , ,		. , , , , , , , , , , , , , , , , , , ,
8.6 LIDAR - LIS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	8.5		1	LS	\$	-	\$ -	\$ 414,620	\$ 414,620	\$ 414,620	\$ 414,620
8.7 Geotech 4 EA \$ - \$ - \$ 3,500 \$ 14,000 \$ 3,500 \$ 14 8.8 Surveying/Staking 1 Site \$ - \$ - \$ - \$ 3,6279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36 Testing & Commissioning of T-Line and Equipment 1 LS \$ - \$ - \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,					_		•				
8.8 Surveying/Staking 1 Site \$ - \$ - \$ - \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,279 \$ 36,2			4					\$ 3,500	\$ 14,000	\$ 3,500	
Serving & Commissioning Serving & Commissioning of T-Line and Equipment Serving & Commissioning of T-Line and Equipment Serving & Commissioning of T-Line and Equipment Serving & Commissioning of T-Line and Equipment Serving & Commissioning & Permitting and Additional Costs Serving & Commissioning & Permitting Costs Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cost Serving & Cos					-						
8.9 Testing & Commissioning of T-Line and Equipment 1 LS \$ - \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 129,569 \$ 2 \$ \$ \$ \$ \$ \$ \$					Ť			,	,	,	,
Permitting and Additional Costs	8.9		1	LS	\$	-	\$ -	\$ 129,569	\$ 129,569	\$ 129,569	\$ 129,569
8.10 Environmental Licensing & Permitting Costs - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<					T			,	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	8.10		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.12 Warranties / LOC's 1 LS \$ - \$ - \$ 15,548 \$ 15,548 \$ 15,548 \$ 15,548 \$ 15 8.13 Real Estate Costs (New) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			-								
8.13 Real Estate Costs (New) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 247,500 \$ - \$ 247,500 \$ - \$ 247,500 \$ - \$ 247,500 \$ - \$ 247,500 \$ - \$ - \$ 247,500 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>											
8.14 Real Estate Costs (Incumbent Utility) - LS \$ - \$ - \$ 247,500 \$ - \$ 247,500 \$											
1 0'T)		Legal Fees	-	LS	\$						

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supp	ly Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 2	25,244	\$ 225,244	\$ -	\$ -	\$ 225,244	\$ 225,244
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 5,183	\$ 5,183	\$ 5,183	\$ 5,183
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 225,244		\$ 1,048,783		\$ 1,274,027

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H. SS New Scot.-Install

NAT & NYPA - T026 - (Segment A, Base) I. New Scotland Substation - Removal Total: \$ 94,849

NAT & NYPA - T026 - (Segn	nent A, Base)			
	Supply		Installation	Total
I. New Scotland Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$		\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ 28,800	\$ 28,800
3. SUBSTATION STRUCTURES	\$.	-	\$ 27,000	\$ 27,000
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 4,500	\$ 4,500
6. CONTROL HOUSE / PANELS	\$. [\$ -	\$ -
7. MISC ITEMS	\$	-	\$ 21,000	\$ 21,000
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$.	-	\$ 13,549	\$ 13,549
CONTRACTOR MARK-UP (OH&P)	\$.	-	\$ -	\$ -
SUBTOTAL:	\$	- [\$ 94,849	\$ 94,849
CONTINGENCY ON ENTIRE PROJECT	\$.	-	\$ -	\$ -
TOTAL:	\$.		\$ 94,849	\$ 94,849

escr	ipti	ion	of	W	or	k:
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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Labor & Equipm Supply Rate Cost		bor & Equipment Cost Total Unit Rate	
I. New S	cotland Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	12	EA	\$ -	\$ -	\$ 2,400	\$ 28,800	\$ 2,400	\$ 28,800
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ 11,000	\$ -	\$ 11,000	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -		\$ -		\$ -
2.2g	Bus Support 3ph Foundations	0		\$ -	\$ -		\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -		\$ -	\$ 2,400	
2.2j	Instrument Transformer Stand Foundations	0		\$ -	\$ -		\$ -	\$ 2,400	
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -		\$ -	\$ 2,400	
2.2m	Wave Trap Stand Foundations	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.2n 2.2p	Misc. Structure Foundations	0	EA	\$ -	\$ -		\$ -	\$ - \$ -	\$ - \$ -
Ζ.Ζμ		-	EA	-	· -	· -	, -	· -	-
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0		\$ -	š -		\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0		\$ -	\$ -		\$ -	\$ 5,200	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4 2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4a 2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -		\$ -
2.4c	115kV-69kV Transformer Foundation w/ Oil Containment	0		\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.40	113KV-03KV Transformer Foundation wy on containment	-	LA	-	-	, -	,	· -	-
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations		EA.	ć	ć	ć	ć	ć	A
2.6a	70' Lightning Mast Foundation	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.6b 2.6c		0	EA	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.00		0	EA	-	-	· -	-	· -	-
TOTAL - SUBST	TATION FOUNDATIONS				\$ -		\$ 28,800		\$ 28,800
	N STRUCTURES				,				
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2 4 -								\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -		
3.1f	Bus Support 1 Ph	12	EA EA	\$ -	\$ -	\$ 2,250	\$ 27,000	\$ 2,250	\$ 27,000
3.1f 3.1g	Bus Support 1 Ph Instrument Transformer Stand	12 0	EA EA EA	\$ - \$ -	\$ -	\$ 2,250 \$ -	\$ 27,000 \$ -	\$ 2,250 \$ -	\$ 27,000 \$ -
3.1f 3.1g 3.1h	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	12 0 0	EA EA EA	\$ - \$ - \$ -	\$ - \$ - \$ -	\$ 2,250 \$ - \$ -	\$ 27,000 \$ - \$ -	\$ 2,250 \$ - \$ -	\$ 27,000 \$ - \$ -
3.1f 3.1g 3.1h 3.1j	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	12 0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ -
3.1f 3.1g 3.1h	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	12 0 0	EA EA EA	\$ - \$ - \$ -	\$ - \$ - \$ -	\$ 2,250 \$ - \$ -	\$ 27,000 \$ - \$ -	\$ 2,250 \$ - \$ -	\$ 27,000 \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures	12 0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV	12 0 0 0 0	EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k 3.2	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone	12 0 0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2a	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	12 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	12 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	12 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2d 3.2d	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2d 3.2d	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 5 - \$ - \$	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.2c 3.c 3.c 3.c 3.c 3.c 3.c 3.c 3.	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 5 - \$ - \$	\$ 2,250 \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ -	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ 2,250	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2c 3.2d 3.2d 3.2d 3.2e 3.2f 3.2g 3.2g 3.2h	Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand	12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ - \$ 1,050	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 2,250 \$ - \$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ 2,250 \$ 1,050	\$ 27,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0		\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0			\$ -		\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0			\$ -		\$ -	\$ -	\$ -
3.3h 3.3j	Arrester Stand Wave Trap Stand	0		\$ -	\$ - \$ -		\$ - \$ -	\$ -	\$ -
3.3k	Misc. Structures	0		\$ -	\$ -		\$ -	\$ -	\$ -
3.5K	INISC. Screenes	0	EA .	7	7	7	7	7	7
TOTAL - SUBST	TATION STRUCTURES				\$ -		\$ 27,000		\$ 27,000
4. MAJOR EQU	IIPTMENT						, ,,,,,		, ,,,,,,
4.1	345kV								
4.1a	Circuit Breakers	0			\$ -		\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV		F.*	ć	ć	ć 7.055	ć	¢ 7.555	
4.2a	Circuit Breakers	0		\$ -	\$ - \$ -	\$ 7,000 \$ 42,000	\$ -	\$ 7,000 \$ 42,000	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	edpactor barno		271		<u> </u>	<u> </u>	Ψ	<u> </u>	*
TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ -		\$ -
5. SMALL EQU	IPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.1b	Disconnect Switches - 3ph w/ manual operator	0			\$ -	\$ 5,500		\$ 5,500	
5.1c	VT'S	0	EA		\$ -		\$ -	\$ -	\$ -
5.1d	CT'S	0			\$ -		\$ -	\$ -	\$ -
5.1e 5.1f	CCVT'S Arresters	<u>0</u> 3		\$ -	\$ -	\$ 2,500 \$ 1,500	\$ - \$ 4,500	\$ 2,500 \$ 1,500	
5.1g	Wave Traps	0		\$ -	\$ -	\$ 2,500		\$ 2,500	
5.1h	Station Service Transformers	0		\$ -	\$ -	\$ 2,500	\$ -	\$ 2,300	\$ -
5.1j		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
,							•		
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0			\$ -	\$ 5,500	\$ -	\$ 5,500	
5.2c	VT'S	0		\$ -	\$ -		\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
5.2e	CCVT'S	0		\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	
5.2f	Arresters Wave Trans	0		\$ -	\$ -	\$ 2,500 \$ 2,500	\$ -	\$ 2,500 \$ 2,500	\$ - \$ -
5.2g 5.2h	Wave Traps Station Service Transformers	0	EA EA	\$ - \$ -	\$ - \$ -	\$ 2,500 \$ -	\$ - \$ -	\$ 2,500	\$ - \$ -
5.2ii	Station Service Hallstoffiels	0		\$ -	\$ -	7	\$ - \$ -	\$ -	\$ -
J.2,		0		T	7	Ŧ	Ŧ	-	-
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0			\$ -	\$ 5,500		\$ 5,500	
5.3c	VT'S	0			\$ -		\$ -	\$ -	\$ -
5.3d	CT'S	0			\$ -		\$ -	\$ -	\$ -
5.3e	CCVT'S	0			\$ -		\$ -	\$ -	\$ -
5.3f	Arresters	0			\$ -	\$ 1,500		\$ 1,500	
5.3g	Wave Traps	0			\$ -		\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0			\$ - \$ -		\$ - \$ -	\$ - \$ -	\$ - \$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
. JIAL - JIVIAL	/ Pini Eline				,		4,500		4,300

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0		\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	
6.2	Protection and Telecom Equipment Panels	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cable	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS		-							
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	1	LS	\$ -	\$ -		\$ 21,000	\$ 21,000	\$ 21,000
7.3	Strain Bus, Connectors & Insulators	0	LS	\$ -	\$ -	\$ 21,000.00	\$ -	\$ 21,000	
7.4	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 21,000		\$ 21,000
I. New So	cotland Substation - Removal				\$ -		\$ 81,300		\$ 81,300
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
8. IVIOD/ DEIVIC	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 813	\$ 813	\$ 813	\$ 813
0.1	Project Management, Material Handling & Amenities			7	7	ý 015	9 015	ÿ 013	ÿ 013
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ 4,362	\$ 4,362	\$ 4,362	\$ 4,362
0.2	and Cost Manager, SHEQ Staff, and Admin Staff)	İ -				7 4,502	7 4,302	7 4,502	7 4,302
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 813	\$ 813	\$ 813	\$ 813
8.4	Site Accommodation, Facilities, Storage	1		\$ -	\$ -	\$ 813	\$ 813	\$ 813	
	Engineering	_		Ť	*	7	, , , , ,	7	7
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 6,504	\$ 6,504	\$ 6,504	\$ 6,504
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking	-	Site	\$ -	š -		š -	\$ 569	
	Testing & Commissioning			Ť	*	7	*	7	*
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 2,033	\$ -	\$ 2,033	\$ -
	Permitting and Additional Costs			Ť	*	7 -,,,,,	*	7 2,000	*
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -		\$ 244	\$ 244	
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17	- METALLICE CONTROL STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STATE STAT		LS	š -	\$ -	Š -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits		LS	l*	\$ -	\$ 81	\$ -	\$ 81	
	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -	, oi	\$ 13,549	, oi	\$ 13,549
. JIAL - IVIUD/	ZELLOS, ELIGINO, I EMINITANO, IGC, I'M G HUMECIS.				· .		7 13,345		7 13,343

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NAT & NYPA - T027 - (Segment A, Double Circuit)

Estimate Revision: 5 Total: \$ 87,471

NAT & NYPA - T027 - (Segment	NAT & NYPA - T027 - (Segment A, Double Circuit)										
		Supply		Installation		Total					
J. Porter Substation - Install											
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-					
2. SUBSTATION FOUNDATIONS	\$	-	\$	-	\$	-					
3. SUBSTATION STRUCTURES	\$	-	\$	-	\$	-					
4. MAJOR EQUIPTMENT	\$	-	\$	-	\$	-					
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	-	\$	-					
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-					
7. MISC ITEMS	\$	15,008	\$	56,904	\$	71,912					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,201	\$	14,358	\$	15,559					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-					
SUBTOTAL:	\$	16,209	\$	71,262	\$	87,471					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	\$	16,209	\$	71,262		87,471					

LOCCE	ption	Ot M	ork.
CSCII	puon	01 44	OIK.

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Porter	Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
1.3	Substation Fence	0	LF	\$ 100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4	Permanent Access Road - 20'-Wide	0	LF	\$ 35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ 14,940	\$ -	\$ 16,000	\$ -	\$ 30,940	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
·									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735		\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0		\$ 3,735	<u> </u>	\$ 4,000	\$ -	\$ 7,735	
	1				1.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,	Page 41 of 60

J. Porter Substation - Install

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	·	\$ 6,188	
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3n	Station Service Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	Lightning Mast Foundations 70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -		\$ -	\$ 10,829	•
2.6a 2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6a						\$ -	·		•
2.6a 2.6b 2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6a 2.6b 2.6c TOTAL - SUBS	70' Lightning Mast Foundation	0	EA	\$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ -	\$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS	70' Lightning Mast Foundation TATION FOUNDATIONS	0	EA	\$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ -	\$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a	70' Lightning Mast Foundation TATION FOUNDATIONS N STRUCTURES	0 0	EA EA	\$ - \$ - \$	\$ - \$ -	\$ - \$ - \$ - \$	\$ - \$ - \$ -	\$ - \$ - \$	\$ - \$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a 3.1b	70' Lightning Mast Foundation FATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0 0	EA EA	\$ - \$ - \$ - \$ 37,000 \$ 37,000	\$ - \$ - \$ -	\$ - \$ - \$ - \$ \$ 37,000 \$ 37,000	\$ - \$ -	\$ - \$ - \$ - \$ - \$ 74,000 \$ 74,000	\$ - \$ - \$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a 3.1b 3.1c	70' Lightning Mast Foundation IATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 0 0	EA EA EA EA EA	\$ - \$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 74,000 \$ 74,000 \$ 29,600	\$ - \$ - \$ - \$ - \$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a 3.1b 3.1c 3.1d	70' Lightning Mast Foundation TATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 74,000 \$ 74,000 \$ 29,600 \$ 29,600	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a 3.1b 3.1c 3.1d 3.1d	70' Lightning Mast Foundation TATION FOUNDATIONS STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Olumn Switch Stands Station Service Transformer Stand Bus Support 3ph	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 74,000 \$ 74,000 \$ 29,600 \$ 29,600 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a 3.1b 3.1c 3.1d 3.1d 3.1d	70' Lightning Mast Foundation FATION FOUNDATIONS N STRUCTURES 34SkV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 74,000 \$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1a 3.1a 3.1c 3.1d 3.1c 3.1d 3.1e 3.1f 3.1g	70' Lightning Mast Foundation FATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 74,000 \$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a 3.1b 3.1c 3.1d 3.1e 3.1d 3.1e 3.1d	70' Lightning Mast Foundation IATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 ph Instrument Transformer Stand Arrester Stand	0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 1,850 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 74,000 \$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g	70' Lightning Mast Foundation FATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ - \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 74,000 \$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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Structures	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,250 \$ 12,025 \$ 12,025 \$ 12,025 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295 \$ 1,295	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,025 \$ 12,02	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ \$ 74,000 \$ 74,000 \$ 29,600 \$ 29,600 \$ 3,700 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ 24,050 \$ 25,550 \$ 11,100	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -		\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
TOTAL - SUBST	ATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU	IPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ -		\$ -
5. SMALL EQU	PTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,000	\$ -	\$ 15,000	\$ -	\$ 55,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	\$ -
5.1c	VT'S	0	EA	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000	\$ -
5.1d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1e	CCVT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1f	Arresters	0	EA	\$ 6,500	\$ -	\$ 1,500	\$ -	\$ 8,000	\$ -
5.1g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j		0	EA	\$ 15,000	\$ -	\$ 7,500	\$ -	\$ 22,500	\$ -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
5.3c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.3d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.3e	CCVT'S	0	EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$ -
5.3f	Arresters	0	EA	\$ 3,420	\$ -	\$ 6,000	\$ -	\$ 9,420	\$ -
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -		\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	EQUIPTMENT / MATERIALS				\$ -		\$ -		\$ -
	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0	EA	\$ 551,250	\$ -			\$ 636,250	\$ -
6.2	Protection and Telecom Equipment Panels	0	EA	\$ 35,000	\$ -	\$ 10,000	\$ -	\$ 45,000	\$ -
6.3	125VDC Batteries	0	EA	\$ 75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
	·		•			•			D 42 -£((

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.4	Control Cable	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.7	DC Distribution System	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.8	Security	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
6.9	Fire Alarm	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
6.10	Generator	0	EA	\$ 100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS									
7.1	Conduit & Cable Trench System	0	LF	\$ 185.00	\$ -	\$ 170.00	\$ -	\$ 355	\$ -
7.2	Rigid Bus, Fittings & Insulators	1	LS	\$ 15,008.40	\$ 15,008	\$ 56,904.00	\$ 56,904	\$ 71,912	\$ 71,912
7.3	Strain Bus, Connectors & Insulators	0	LF	\$ 13.38	\$ -	\$ 39.35	\$ -	\$ 53	\$ -
7.4	Grounding System	0	LF		\$ -	\$ 32.58	\$ -	\$ 40	\$ -
7.5	Strain Bus Insulators - 345kV	0	EA	\$ 2,000	\$ -		\$ -	\$ 3,050	
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -	\$ 750	\$ -	\$ 2,150	
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$ -
7.8	Low Voltage AC Station Service	0	LS	\$ 50,000	\$ -	\$ 75,000	\$ -	\$ 125,000	\$ -
7.9	SSVT Service	0	LS	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	\$ -
7.10	Control Cables	0	LS	\$ 472,500	\$ -	\$ 472,500	\$ -	\$ 945,000	\$ -
7.11	Control Conduits from Trench to Equipment	0	LS	\$ 125,000	\$ -	\$ 125,000	\$ -	\$ 250,000	\$ -
7.12	Misc. Materials (Above and Below Ground)	0	LS	\$ 180,000	\$ -	\$ 180,000	\$ -	\$ 360,000	\$ -
7.13									
7.14									
7.15									
7.16									
7.17									
7.18									
7.19									
7.20									
7.21									
7.22									
7.23									
7.24									
7.25									
TOTAL - MISC	ITEMS				\$ 15,008		\$ 56,904		\$ 71,912
	Substation - Install				\$ 15,008		\$ 56,904		\$ 71,912
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 719	\$ 719	\$ 719	\$ 719
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 3,859	\$ 3,859	\$ 3,859	\$ 3,859
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 719	\$ 719	\$ 719	\$ 719
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 719		\$ 719	
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 5,753	\$ 5,753	\$ 5,753	\$ 5,753
8.6	LiDAR	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	EA	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500	\$ -
8.8	Surveying/Staking	1	Site	\$ -	\$ -	\$ 503	\$ 503	\$ 503	\$ 503
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment Permitting and Additional Costs	1	LS	\$ -	\$ -	\$ 1,798	\$ 1,798	\$ 1,798	\$ 1,798
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -		\$ -		\$ -
8.12	Warranties / LOC's	1		\$ -	\$ -				
8.13	Real Estate Costs (New)	-	LS		\$ -				\$ -
8.14	Real Estate Costs (Incumbent Utility)	1			\$ -				
0.1.	1 International Council			T	7	I T	17	7	7

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.15	Legal Fees		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17			LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 1,201	\$ 1,201	\$ -	\$ -	\$ 1,201	\$ 1,201
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 72	\$ 72	\$ 72	\$ 72
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,201		\$ 14,358		\$ 15,559

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NAT & NYPA - T026 - (Segment A, Base) K. Porter Substation - Removal

553,361

Total: \$

NAT & NYPA - T02	6 - (Segment A, Ba	se)				
		Supply		Installation		Total
K. Porter Substation - Removal						
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-
2. SUBSTATION FOUNDATIONS	\$	-	\$	126,600	\$	126,600
3. SUBSTATION STRUCTURES	\$	-	\$	206,100	\$	206,100
4. MAJOR EQUIPTMENT	\$	-	\$	43,500	\$	43,500
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	59,500	\$	59,500
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-
7. MISC ITEMS	\$	-	\$	38,613	\$	38,613
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$	79,048	\$	79,048
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	-	\$	553,361	\$	553,361
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	\$		¢	553,361	Ġ	553,361

Supply Rate Cost	The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The color The	Ethnicist Quantity	Description	of Work:								
1.1 See Works including dearing, sediment controls, rough grading, and final grading.	Sufference Substitution (selenting, sediment controls, rough grading, and final grading 0 ACRES S S 20300 S S 20300 S	SETT PREFY GRADING FENCING CVIL 1.1 Set voits including clearing, seriment controls, rough grading, and final grading. 0 ACRES 5 5 5 75 5 5 75 5 5	Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost			Total Unit Rate	TOTAL
1.1 Site Works including clearing, sediment controls, rough grading, and final grading. 0 ACRES 5 5 5 203,000 5 1.2 Storos stone within substation fence. 0 UF 5 5 5 5 75 5 5 150 5 1.3 1.3 Substation Fence 0 UF 5 5 5 5 5 5 5 5 5	1.1 Site Works including clearing, sediment controls, rough grading, and final grading.	1.1 Size Works Including cealment controls, rough grading, and final grading. 0 ACRES	K. Porte	r Substation - Removal								
1.2 Station store within substation fence.	1.1 Station stone within substation fence.	1.1 Station store within substation fence.	1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.3 Substation Fence	1.1	13 Substation Ferce	1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.4	1.4	1.4		Station stone within substation fence.	0	CY	\$ -	\$ -			\$ 75	\$ -
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2.2 230kV EA \$ - \$ 7,200 \$ 2,1600 \$ 7,200 \$ 2.2a Circuit Breaker Foundations 3 EA \$ - \$ - \$ 7,200 \$ 7,200 \$ 2.2b Capacitor Bank Foundations 0 EA \$ - \$ 32,000 \$ - \$ 32,000 \$	2.2 230kV Same of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the produ	2.2 230kV Same of the productions of the productions of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the production of the pro		Misc. Structure Foundations				7		-		•
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	2.2d Caisson DE Foundations (for DE A frame str shared column) 5 EA \$ - \$ 11,000 \$ 55,000 \$ 11,000 \$ 55,000 \$ 11,000 \$ 55,000 \$ 12,000 \$ 55,000 \$ 55,000 \$ 55,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000	2.2d Caisson DE Foundations (for DE A frame str shared column) 5 EA \$ - \$ 11,000 \$ 55,000 \$ 11,000 \$ 55,000 \$ 55,000 \$ 55,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ 56,000 \$ \$ 5 5 5						7				
	2.2e Switch Stand Foundations 5 EA \$ - \$ - \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$ 26,000 \$	2.2e Switch Stand Foundations 5 EA \$ - \$ - \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 26,000 \$ 5,200 \$ 5,200 \$ 5,200 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5						7				
		2.2f Station Service Transformer Stand Foundation 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						7				
		2.2g Bus Support 3ph Foundations 0 EA \$ - \$ - \$ - \$ - \$ - \$ -						7	,	. ,	, ,	
	2.2g Bus Support 3ph Foundations 0 EA \$ - \$ - \$ - \$ - \$ - \$						'		•	'		
2.2g Bus Support 3ph Foundations 0 EA \$ - \$ - \$ - \$ - \$		2.2h Bus Support 1 Ph Foundations 0 EA \$ - \$ - \$ 2,400 \$ -	Z.Zg									

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	4	EA	\$ -	\$ -	\$ 2,400	\$ 9,600	\$ 2,400	\$ 9,600
2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ -	\$ 2,400	\$ 14,400	\$ 2,400	\$ 14,400
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -			\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -			\$ -
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3	115kV	-							
2.3a	Circuit Breaker Foundations	0		\$ -	\$ -	\$ -	'	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3c 2.3d	Caisson DE Foundations (for DE A frame str stand alone)	0	EA EA	\$ -	\$ -	\$ - \$ -		\$ - \$ -	\$ - \$ -
2.3u 2.3e	Caisson DE Foundations (for DE A frame str shared column)	0			'	•			
2.3e	Switch Stand Foundations Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200 \$ -		\$ 5,200 \$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -			\$ -
2.3g 2.3h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ -		\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	·	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
				*	7	*	T	*	•
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000		\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	·								
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad (40'x125')	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0		\$ -	\$ -	\$ -		\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
					4		4		4
	ATION FOUNDATIONS				\$ -		\$ 126,600		\$ 126,600
3. SUBSTATION									
3.1	345kV	0	ГА	ċ	ċ	ċ	\$ -	\$ -	ć
3.1a 3.1b	Substation A-Frame Structures - Stand alone	0	EA EA	\$ - \$ -	\$ - \$ -	\$ -		\$ - \$ -	\$ - \$ -
3.1c	Substation A-Frame Structures - Shared Column Switch Stands	0	EA	\$ - \$ -	\$ -	\$ -	7	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1e	Bus Support 3ph	0		\$ -	\$ -	\$ -		\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1g	Instrument Transformer Stand	0		\$ -	\$ -	\$ -			\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	7	т	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
							·	•	•
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column	5	EA	\$ -	\$ -	\$ 27,000	\$ 135,000	\$ 27,000	\$ 135,000
3.2c	Switch Stands	6	EA	\$ -	\$ -	\$ 9,750	\$ 58,500	\$ 9,750	\$ 58,500
	Station Service Transformer Stand	0		\$ -	\$ -			\$ -	
	Bus Support 3ph	0		\$ -					\$ -
	Bus Support 1 Ph	0		\$ -	\$ -			\$ 2,250	
3.2g	Instrument Transformer Stand	6		\$ -		\$ 1,050		\$ 1,050	
3.2h	Arrester Stand	6		\$ -		\$ 1,050		\$ 1,050	
3.2j	Wave Trap Stand	0		\$ -	\$ -			\$ 4,500	
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV			4	4	A			
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ - P47600

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION STRUCTURES				\$ -		\$ 206,100		\$ 206,100
4. MAJOR EQU									
	345kV								•
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d	20011/								
	230kV		F.	ć	<u>^</u>	A	A 12.555	A	A
	Circuit Breakers	3	EA FA	\$ -	\$ -	\$ 14,500	\$ 43,500	\$ 14,500	\$ 43,500
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.2	AAFIN/								
	115kV Circuit Breakers	0	EA	\$ -	\$ -	\$ -	s -	\$ -	\$ -
		0	EA	\$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
4.3b	Capacitor Banks	U	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - MAIO	REQUIPTMENT				\$ -		\$ 43,500		\$ 43,500
	PTMENT / MATERIALS				\$ -		\$ 45,500		\$ 43,500
	345kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	VTS CT'S	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1i	Station Service Transformers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1			271	*	· ·	,	Ÿ	Ÿ	*
5.2	230kV								
	Line Switches - 3ph w/ motor operator	2	EA	\$ -	\$ -	\$ 5,500	\$ 11,000	\$ 5,500	\$ 11,000
	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
	VT'S	2	EA	\$ -	\$ -		\$ 3,000	\$ 1,500	
	CT'S	0	EA	\$ -	\$ -	Ś -	\$ -	\$ -	\$ -
	CCVT'S	6		\$ -	\$ -	\$ 1,500	\$ 9,000	\$ 1,500	\$ 9,000
	Arresters	6	EA	\$ -	\$ -	\$ 2,500	\$ 15,000	\$ 2,500	
	Wave Traps	2		\$ -	\$ -	\$ 2,500	\$ 5,000	\$ 2,500	
	Station Service Transformers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CCVT'S	0		\$ -	\$ -		\$ -	\$ -	
	Arresters	0		\$ -	\$ -			\$ 1,500	
	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
	Station Service Transformers	0		\$ -			\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	EQUIPTMENT / MATERIALS				\$ -		\$ 59,500		\$ 59,500
	DUSE / PANELS / GENERATOR								
	CONTROL HOUSE	0		\$ -	\$ -			\$ 150,000	
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cable	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	Ś -	Ś -	\$ -	\$ -
		-		7	T	7	7	*	7
TOTAL - CONTE	OL HOUSE / PANELS / GENERATOR				Ś -		\$ -		\$ -
7. MISC ITEMS					ų.		*		•
	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
	Rigid Bus, Fittings & Insulators	1	L.S.	\$ -	\$ -	\$ 18,937.50	\$ 18,938	\$ 18,938	
	Strain Bus, Connectors & Insulators	1	L.S.			\$ 19,675.00	\$ 19,675	\$ 19,675	
				<u> </u>	\$ - \$ -	,		1 -,	
	Grounding System	0	EA	\$ -	· -	\$ 42,000.00	\$ -	\$ 42,000	· -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	TEMS				\$ -		\$ 38,613		\$ 38,613
V Douton	Cubatation Domanal				\$ -		\$ 474,313		\$ 474,313
	Substation - Removal				\$ -		\$ 4/4,313		\$ 474,313
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 25,451	\$ 25,451	\$ 25,451	\$ 25,451
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	
	Engineering			7	T	7 .,	7	7 .,	7 .,
	Design Engineering	1	LS	\$ -	\$ -	\$ 37,945	\$ 37,945	\$ 37,945	\$ 37,945
	LiDAR	-	Mile	\$ -		\$ -	\$ -	\$ -	\$ -
	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Surveying/Staking	-	Site	\$ -	\$ -	\$ 3,320	\$ -	\$ 3,320	
	Testing & Commissioning		Site	-	-	3,320	, -	Ç 3,320	-
		-	LS	\$ -	\$ -	\$ 11,858	\$ -	\$ 11,858	\$ -
	Testing & Commissioning of T-Line and Equipment	-	L3	ş -	3 -	\$ 11,656	ş -	\$ 11,656	, -
	Permitting and Additional Costs		1.0	6		ć	6	.	_
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 1,423	\$ 1,423	\$ 1,423	\$ 1,423
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 474	\$ -	•	\$ -
	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:		-		\$ -		\$ 79,048		\$ 79,048

L. Interconnection Edic Station

Estimate Revision: 5 Total: \$ 2,132,044

NAT & NYPA - T026 - (Segme	nt A, Ba	se)		
		Supply	Installation	Total
L. Interconnection Edic Station				
1. CLEARING & ACCESS	\$	-	\$ 367,850	\$ 367,850
2. FOUNDATIONS	\$	168,366	\$ 170,169	\$ 338,536
3. STRUCTURES	\$	501,469	\$ 321,821	\$ 823,289
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	160,000	\$ 94,400	\$ 254,400
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	66,387	\$ 281,583	\$ 347,969
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	896,222	\$ 1,235,823	\$ 2,132,044
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	896,222	\$ 1,235,823	\$ 2,132,044

)escri	iption of	Wo	rk:
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Description	OI WORK:			_							
Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	1	TOTAL
L. Interd	onnection Edic Station										
1. CLEARING	& ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$	10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45	\$ -	\$ 45	\$	-
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4			\$	14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70				245,000
1.6	Matting - To Work Area	300.0	LF	\$	-	\$ -	\$ 70	\$ 21,000	\$ 70	\$	21,000
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800		\$ 516,800		-
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$	5,000
1.9	Work Pads	20,000.0	SF	\$	-	\$ -	\$ 4	\$ 70,400	\$ 4	\$	70,400
1.10	Restoration for Work Pad areas	4,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 600	\$ 0	\$	600
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$	-
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$	-
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$	-
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$	-
1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$	-
1.16	Culverts / Misc. Access	-	EA	\$	750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$	-
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$	1,850
1.18						\$ -		\$ -		\$	-
1.19						\$ -		\$ -		\$	-
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$	-
TOTAL - CLEA	RING & ACCESS					\$ -		\$ 367,850		Ś	367,850
2. FOUNDATI								,			
2.1	Foundation – Drilled Pier – 8'X 27'	3	EA	\$	41,332	\$ 123,995	\$ 41,774	\$ 125,322	\$ 83,106	\$	249,317
2.2	Foundation – Drilled Pier – 8'X 29'	1	EA	\$	44,372	\$ 44,372	\$ 44,847	\$ 44,847	\$ 89,219	\$	89,219
2.3	Rock Excavation Adder	-	CY	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$	-
2.4											
2.5											
2.6											-
2.7				_							
2.8											
2.9				_							
2.10				1							
2.11											
2.12				1							
2.13											
2.14											
	1										50 -5 (O

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.15											
TOTAL - FOUN	DATIONS					\$ 168,366		\$ 170,169		\$	338,536
3. STRUCTURE	S .										
3.1	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) – 105′	3	Structure	\$		\$ 296,648	\$ 59,330			\$	474,636
3.2	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1		\$	202,797						324,475
3.3	Install Grounding and Grounding Accessories	4	Pole	\$	506		\$ 5,539	\$ 22,154	\$ 6,045	\$	24,178
3.4						\$ -		\$ -		\$	-
3.5						<u> </u>		A			
3.6						\$ -		\$ - \$ -		\$	-
3.7						\$ - \$ -		\$ -		\$	-
3.9						\$ -		\$ -		\$	
3.10						\$ -		\$ -		\$	-
3.11						\$ -		\$ -		\$	-
3.12						\$ -		\$ -		\$	-
3.13						\$ -		\$ -		Ś	-
3.14				1		\$ -		\$ -		\$	_
3.14				1		·		7			
3.15						\$ -		\$ -		\$	-
TOTAL - STRUC	CTURES					\$ 501,469		\$ 321,821		\$	823,289
4. CONDUCTO	R, SHIELDWIRE, OPGW										
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"		LF	\$	1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$	-
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35		\$ 5.00	\$ -	\$ 6.35		-
4.3	(1) 3/8" EHS7 Steel	-	LF	\$	0.47		\$ 5.00	\$ -	\$ 5.47		-
4.5	Remove Existing Cable From Existing Structures	-	Mile	\$		\$ -	\$ 30,000	\$ -	\$ 30,000.00		-
4.6	Remove Existing OPGW Cable	-	Mile	\$		\$ -	\$ 12,000	\$ -	\$ 12,000.00		-
4.7	Remove Existing EH7	-	Mile	\$	-	\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$	-
4.8											
4.9		-		1.							
4.10	Rider Poles - Relocated	-	Set	\$		\$ -	\$ 3,500		\$ 3,500.00		-
4.11	Rider Poles UCTOR, SHIELDWIRE, OPGW:		EA	\$	1,750	\$ - \$ -	\$ 3,500	\$ - \$ -	\$ 5,250.00	\$	
	, FITTINGS, HARDWARE					\$ -		\$ -		>	-
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)										
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)										
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$	1,800	\$ 108,000	\$ 720	\$ 43,200	\$ 2,520	Ś	151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)			1		7 270,000	, , , ,	+ 10,200	7 -,	•	
5.5	OPGW Assembly - Tangent		Assembly	\$	200	\$ -	\$ 150	\$ -	\$ 350	\$	-
5.6	OPGW Assembly - Angle / DE	4	Assembly	\$	250						1,600
5.7	OHSW Assembly - Angle / DE	4	Assembly	\$		\$ 1,000		\$ 600	\$ 400	\$	1,600
5.8	OPGW Splice Boxes	-	Set	\$	1,746	\$ -	\$ 2,274	\$ -	\$ 4,020	\$	-
5.9	OPGW Splice & Test	-	EA	\$	2,520	\$ -	\$ 2,520	\$ -	\$ 5,040	\$	-
5.10	Spacer - Conductor		EA	\$	50		\$ 35		\$ 85	\$	-
5.11	Vibration Dampers - Conductor	-	EA	\$	35	\$ -	\$ 35	\$ -	\$ 70	\$	-
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$	-
5.13		_	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	ć	_
	Guys, Anchors, and Accessories						7		, , , , , , , , , , , , , , , , , , , ,		
5.14	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$	-
5.15				+							
5.16 5.17				+							
				+							
5.18 5.19	Interconnection Arrangements	1	EA	\$	50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 100,000	ć	100,000
5.19	micromicedon Arrangements	1	EM	1	30,000	y 30,000	ا الالاران	÷ 30,000	7 100,000	ų	100,000
	ATOR, FITTINGS, HARDWARE					\$ 160,000		\$ 94,400		\$	254,400
										Ś	
	onnection Edic Station					\$ 829,835		\$ 954,240		Ş	1,784,075
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization			+.							
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$	17,841
	Project Management, Material Handling & Amenities			+							
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 95,732	\$ 95,732	\$ 95,732	\$	95,732

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	Material Supply Co	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	Utility PM and Project Oversite	1	LS		\$ -	7 27,01			
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 17,84	1 \$ 17,841	\$ 17,841	\$ 17,841
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 89,20	\$ 89,204	\$ 89,204	\$ 89,204
6.6	Lidar	-	LS	\$ -	\$ -	\$ 5,35	2 \$ -	\$ 5,352	\$ -
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,50	3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 12,48	9 \$ 12,489	\$ 12,489	\$ 12,489
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 20,00	20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 5,35	2 \$ 5,352	\$ 5,352	\$ 5,352
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 66,38	7 \$ 66,3	37 \$ -	\$ -	\$ 66,387	\$ 66,387
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 1,78	1,784	\$ 1,784	\$ 1,784
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 66,3	37	\$ 281,583		\$ 347,969

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NAT & NYPA - T026 - (Segment A, Base) M. Interconnection New Scotland Station

5		Total:	\$ 3,115,703		
NAT & NYPA - T026 - (Segme	nt A, Ba	ise)			
		Supply	Installation		Total
M. Interconnection New Scotland Station					
1. CLEARING & ACCESS	\$	-	\$ 367,850	\$	367,850
2. FOUNDATIONS	\$	365,657	\$ 473,093	\$	838,749
3. STRUCTURES	\$	655,465	\$ 445,628	\$	1,101,092
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,555	\$ 26,100	\$	29,655
5. INSULATORS, FITTINGS, HARDWARE	\$	161,130	\$ 95,795	\$	256,925
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	94,864	\$ 426,567	\$	521,432
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	1,280,670	\$ 1,835,033	\$	3,115,703
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TAT.1		4 000 070	4 005 000	A	0.445.500

December:	-f.Wl-								
Description	OT WOFK:								
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	connection New Scotland Station								
1. CLEARING 8	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$ -	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	300.0	LF	\$ -	\$ -	\$ 70	\$ 21,000	\$ 70	\$ 21,000
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	20,000.0	SF	\$ -	\$ -	\$ 4	\$ 70,400	\$ 4	\$ 70,400
1.10	Restoration for Work Pad areas	4,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 600	\$ 0	\$ 600
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 75) \$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 2	7 \$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEA	RING & ACCESS				\$ -		\$ 367,850		\$ 367,850
2. FOUNDATION	ONS								
2.1	Foundation – Drilled Pier – 8'X 50'	3	EA	\$ 76,50	\$ 229,501	\$ 77,320	\$ 231,959	\$ 153,820	\$ 461,459
2.2	Foundation – Drilled Pier – 8'X 89'	1	EA	\$ 136,15	5 \$ 136,156	\$ 137,614	\$ 137,614	\$ 273,770	\$ 273,770
2.3	Rock Excavation Adder	51.8	СУ	\$ -	\$ -	\$ 2,000	\$ 103,520	\$ 2,000	\$ 103,520
2.4									
2.5									
2.6									
2.7									
2.8									
2.9									
2.10				1			1		

Estimate

Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.11											
2.12											
2.13											
2.14				+							
TOTAL - FOUN	DATIONS					\$ 365,657		\$ 473,093		Ś	838,749
3. STRUCTURE						7 000,000		+,			223/1 12
3.1	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	3	Structure	\$	178,026	\$ 534,077	\$ 106,815	\$ 320,446	\$ 284,841	\$	854,522
3.2	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$	116,328	\$ 116,328	\$ 69,797	\$ 69,797	\$ 186,125		186,125
3.3	Install Grounding and Grounding Accessories	10	Pole	\$	506		\$ 5,539	\$ 55,385	\$ 6,045	\$	60,445
3.4						\$ -		\$ -			
3.5						\$ -		\$ -			
3.6				-		\$ - \$ -		\$ -			
3.8						\$ -		\$ -			
3.9				1		\$ -		\$ -			
3.10						\$ -		\$ -			
3.11						\$ -		\$ -			
3.12						\$ -		\$ -			
3.13				1		\$ -		\$ -			
3.14 3.15				-		\$ - \$ -		\$ - \$ -			
TOTAL - STRUC	TURES					\$ 655,465		\$ 445,628		\$	1,101,092
	R, SHIELDWIRE, OPGW					Ç 055) 105		113,020			1,101,032
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	1,500	LF	\$	1.90	\$ 2,850	\$ 5.00	\$ 7,500	\$ 6.90	\$	10,350
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35		\$ 5.00	\$ -	\$ 6.35	\$	-
4.3	(1) 3/8" EHS7 Steel	1,500	LF	\$	0.47					-	8,205
4.5	Remove Existing 345kV Cable From Existing Structures	0.3	Mile	\$	-	\$ -	\$ 30,000	\$ 7,500			7,500
4.6	Remove Existing OPGW Cable	-	Mile	\$		\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$	-
4.7	Remove Existing EH7	0.3	Mile	\$	-	\$ -	\$ 12,000	\$ 3,600	\$ 12,000.00	\$	3,600
4.8											
4.10	Rider Poles - Relocated	_	Set	Ś	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$	-
4.11	Rider Poles	-	EA	\$	1,750		\$ 3,500	\$ -	\$ 5,250.00	-	-
TOTAL: CONDU	JCTOR, SHIELDWIRE, OPGW:					\$ 3,555		\$ 26,100		\$	29,655
5. INSULATOR,	FITTINGS, HARDWARE										
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$			\$ 720		\$ 2,520		-
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900	\$ -	\$ 560		\$ 1,460		-
5.3 5.4	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	60	Assembly Assembly	\$	1,800 900	\$ 108,000 \$ -	\$ 720 \$ 560		\$ 2,520 \$ 1,460		151,200
5.5	OPGW Assembly - Tangent	-	Assembly	\$	200		\$ 150		\$ 350		
5.6	OPGW Assembly - Angle / DE	-	Assembly	\$		\$ -	\$ 150		\$ 400	\$	_
5.7	OHSW Assembly - Angle / DE	4	Assembly	\$	250				\$ 400	-	1,600
5.8	OPGW Splice Boxes	-	Set	\$	1,746		\$ 2,274	\$ -	\$ 4,020		-
5.9	OPGW Splice & Test	-	EA	\$	2,520		\$ 2,520		\$ 5,040		-
5.10	Spacer - Conductor	9	EA	\$	50				\$ 85		765
5.11	Vibration Dampers - Conductor	48	EA	\$	35				\$ 70		3,360
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$	-
5.13	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.14	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$	-
5.15	, ,			Ė		\$ -	,,,,,,	\$ -	,	\$	-
5.16	Interconnection Arrangements	1	EA	\$	50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 100,000	\$	100,000
5.17						\$ -		\$ -		\$	-
5.18				1		\$ -		\$ -		\$	-
5.19				1		\$ -		\$ -		\$	-
5.20	ATOR, FITTINGS, HARDWARE					\$ - \$ 161,130		\$ - \$ 95,795		\$	256,925
	,							,		_	
	connection New Scotland Station					\$ 1,185,806		\$ 1,408,465		\$	2,594,271
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization		1.0	1		¢	A 25.5:5	ć 25.0:-	ć 25.0:-		
6.1	Mob / Demob Project Management, Material Handling & Amenities	1	LS	\$	-	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$	25,943
i	rroject management, material namining & Amerikas			1			l .				

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 139,206	\$ 139,206	\$ 139,206	\$ 139,206
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 129,714	\$ 129,714	\$ 129,714	\$ 129,714
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 18,160	\$ 18,160	\$ 18,160	\$ 18,160
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 94,864	\$ 94,864	\$ -	\$ -	\$ 94,864	\$ 94,864
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 2,594	\$ 2,594	\$ 2,594	
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 94,864		\$ 426,567		\$ 521,432

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M. In. New Scotland SS

N. Interconnection Rotterdam Station

Estimate Revision: 5 Total: \$ 4,622,733

NAT & NYPA - T026 - (Segmen	t A, Bas	e)		
		Supply	Installation	Total
N. Interconnection Rotterdam Station				
1. CLEARING & ACCESS	\$	-	\$ 1,233,050	\$ 1,233,050
2. FOUNDATIONS	\$	192,145	\$ 325,963	\$ 518,108
3. STRUCTURES	\$	546,722	\$ 837,150	\$ 1,383,872
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	65,923	\$ 437,250	\$ 503,173
5. INSULATORS, FITTINGS, HARDWARE	\$	165,730	\$ 118,480	\$ 284,210
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	77,642	\$ 622,679	\$ 700,321
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,048,161	\$ 3,574,572	\$ 4,622,733
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,048,161	\$ 3,574,572	4,622,733

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Interc	onnection Rotterdam Station								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	7.0	Acre	\$ -	\$ -	\$ 15,000	\$ 105,000	\$ 15,000	\$ 105,000
1.2	Clearing the ROW - Light (mowing)	5.0	Acre	\$ -	\$ -	\$ 5,000	\$ 25,000	\$ 5,000	\$ 25,000
1.3	Access Road		LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	4,800.0	LF	\$ -	\$ -	\$ 4			
	Matting - Access and ROW	4,800.0	LF	\$ -	\$ -	\$ 70			
	Matting - To Work Area	2,400.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	-	LS	\$ -		\$ 516,800		\$ 516,800	
1.8	ROW Restoration	1.0	Mile	\$ -	\$ -	\$ 10,000			\$ 10,000
1.9	Work Pads	160,000.0	SF	\$ -	\$ -		\$ 563,200		\$ 563,200
1.10	Restoration for Work Pad areas	32,000.0	SF	\$ -		\$ 0.2			, , , , , , , , , , , , , , , , , , , ,
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	\$ -
	Air Bridge		EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580		\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	\$ -
1.16	Culverts / Misc. Access		EA	\$ 750		\$ 1,250		\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	,	\$ 1,850	\$ 1,850
1.18					\$ - \$ -		\$ - \$ -		\$ -
1.20	Crushed Rock	0	СҮ	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEAR	ING & ACCESS				\$ -		\$ 1,233,050		\$ 1,233,050
2. FOUNDATIO	NS .								
2.1	10' ED Rock BF	6	EA	\$ 358	\$ 2,145	\$ 3,575	\$ 21,450	\$ 3,933	\$ 23,595
2.2	15' ED Rock BF	18	EA	\$ 536	\$ 9,653	\$ 5,363	\$ 96,525	\$ 5,899	\$ 106,178
2.3	20' ED Rock BF	4	EA	\$ 715	\$ 2,860	\$ 7,150	\$ 28,600	\$ 7,865	\$ 31,460
2.4	Foundation – Drilled Pier – 8'X 29'	4	EA	\$ 44,372		\$ 44,847	\$ 179,388		\$ 356,875
2.5	Rock Excavation Adder	-	СУ	\$ -	\$ -	\$ 2,000		\$ 2,000	\$ -
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ -		\$ -
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		Page 56 of 60

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	Non-Possibility	Estimated Occasion	11		***************************************	Labor & Equipment	Labor & Equipment	Tatal Halfa Bata	TOTAL
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate	TOTAL
2.14					\$ -		\$ -		\$ -
2.15					\$ -		\$ -		\$ -
TOTAL - FOUN					\$ 192,145		\$ 325,963		\$ 518,108
3. STRUCTURE		_							
3.1	15kV 3-CKT TANGENT DIST WOOD POLE	3	Pole	\$ 3,500	\$ 10,500				\$ 21,300
3.2	15Kv 3-CKT MA DIST WOOD POLE	1 2	Pole	\$ 3,500 \$ 3,500	\$ 3,500				\$ 7,100 \$ 14,200
	15kV 3-CKT DE - WOOD POLE 115kV 1-CKT TANGENT - WOOD POLE	5	Pole Pole	\$ 3,500	\$ 7,000 \$ 22,500	\$ 3,600 \$ 4,400	\$ 7,200 \$ 22,000		\$ 44,500
3.5	115kV 1-CKT MA - WOOD POLE	2	Pole	\$ 4,500	\$ 9,000	\$ 4,400			\$ 17,800
	115kV 1-CKT DE - WOOD POLE	11	Pole	\$ 5,500	\$ 60,500	\$ 5,000	\$ 55,000		\$ 115,500
	115kV 2-CKT TANGENT - WOOD POLE	4	Pole	\$ 5,500	\$ 22,000	\$ 5,000			\$ 42,000
3.8	115kV 2-CKT DE - STEEL POLE	4	Pole	\$ 98,883	\$ 395,530	\$ 59,330	\$ 237,318		\$ 632,848
3.9	Remove Existing Structure	24	EA		\$ -	\$ 12,300			\$ 295,200
3.10	-				\$ -		\$ -		\$ -
3.11					\$ -		\$ -		\$ -
3.12	Install Grounding and Grounding Accessories	32	Pole	\$ 506	\$ 16,192	\$ 5,539	\$ 177,232	\$ 6,045	\$ 193,424
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
TOTAL - STRUC					\$ 546,722		\$ 837,150		\$ 1,383,872
	R, SHIELDWIRE, OPGW								
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	23,400	LF	\$ 1.90	\$ 44,460	\$ 5.00	\$ 117,000		\$ 161,460
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35	\$ -	\$ 5.00			\$ -
4.3	(1) 3/8" EHS7 Steel	7,800	LF	\$ 0.47	\$ 3,666	\$ 5.00			\$ 42,666
4.5	Remove Existing Cable	6.6	Mile	\$ -	\$ -	\$ 30,000	\$ 197,700		\$ 197,700
4.6	Remove Existing EH7	2.2	Mile	\$ -	\$ -	\$ 12,000	\$ 26,400		\$ 26,400
4.7	15kV - (1) 477kcmil 26/7 ACSR "Hawk" 15kV - (1) 336kcmil 26/7 ACSR "Linnet"	9,630 1,800	LF LF	\$ 1.62 \$ 1.22	\$ 15,601 \$ 2,196	\$ 5.00 \$ 5.00	\$ 48,150 \$ 9,000		\$ 63,751 \$ 11,196
4.8	15KV - (1) 556KCHIII 20/7 ACSK EHIHEL	1,800	LF	\$ 1.22	\$ 2,190	\$ 5.00	\$ 9,000	\$ 0.22	\$ 11,196
4.10	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$ 1,750	\$ -	\$ 3,500			\$ -
	UCTOR, SHIELDWIRE, OPGW:			, ,	\$ 65,923	,	\$ 437,250		\$ 503,173
5. INSULATOR,	FITTINGS, HARDWARE								
5.1	115kV Tangent (1-Group of 9-Bells Each Assembly)	33	Assembly	\$ 1,000	\$ 33,000				\$ 51,480
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	66	Assembly	\$ 1,000	\$ 66,000				\$ 102,960
	15kV Tangent	12	Assembly	\$ 100	\$ 1,200	\$ 75			\$ 2,100
	15kV Dead-end & Angle Insulators	18	Assembly	\$ 100	\$ 1,800				\$ 3,150
	Neutral, Distribution, Tangent	4	Assembly	\$ 100	\$ 400	\$ 75			\$ 700
5.6	Neutral, Distribution, DE/Side	2	Assembly	\$ 100 \$ 100	\$ 200	\$ 75 \$ 75			\$ 350
5.7 5.8	Jumper, DE/Angle, 3PH	2	Assembly	\$ 100 \$ 200	\$ 400 \$ 400	\$ 75 \$ 150			\$ 700 \$ 700
5.9	OPGW Assembly - Tangent OSHW Assembly - Tangent	11	Assembly Assembly	\$ 250	\$ 2,750				\$ 4,400
	OHSW Assembly - Angle / DE	38	Assembly	\$ 250	\$ 9,500	\$ 150	\$ 5,700		\$ 15,200
5.11	OPGW Splice Boxes	-	Set	\$ 1,746	\$ -	\$ 2,274			\$ -
5.12	OPGW Splice & Test	-	EA	\$ 2,520	\$ -	\$ 2,520	\$ -		\$ -
5.13	Spacer - Conductor		EA	\$ 50	\$ -	\$ 35	\$ -		\$ -
5.14	Vibration Dampers - Conductor	-	EA	\$ 35	\$ -	\$ 35	\$ -		\$ -
5.15	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$ 27	\$ -	\$ 35			\$ -
5.16	Guys, Anchors, and Accessories	14.0	EA	\$ 720	\$ 10,080	\$ 885	\$ 12,390		\$ 22,470
5.17	Misc. materials (Signs and Markers)	-	Mile	\$ 770	\$ -	\$ 1,006			\$ -
5.18					\$ -		\$ -		\$ -
5.19	Interconnection Arrangements	8	EA	\$ 5,000	\$ 40,000	\$ 5,000	\$ 40,000	\$ 10,000	\$ 80,000
5.20					\$ -		\$ -		\$ -
5.21					\$ -		\$ -		\$ -
5.22					\$ -		\$ -		\$ -
5.23	ATOR, FITTINGS, HARDWARE				\$ - \$ 165,730		\$ - \$ 118,480		\$ - \$ 284,210
	connection Rotterdam Station				\$ 970,519		\$ 2,951,893		\$ 3,922,412
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				7 370,319		2,331,033		9,322,412
J. IVIOB/ DEIVIC	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
	1			L .		. 33,224	. 55,224	. 33,224	

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e Mat	terial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	тс	OTAL
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 210,473	\$ 210,473	\$ 210,473	\$	210,473
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 39,224	\$ 39,224	\$ 39,224	\$	39,224
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 39,224	\$ 39,224	\$ 39,224	\$	39,224
	Engineering										
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 196,121	\$ 196,121	\$ 196,121	\$	196,121
6.6	Lidar	1	LS	\$ -	\$	-	\$ 11,767	\$ 11,767	\$ 11,767	\$	11,767
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$	3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 27,457	\$ 27,457	\$ 27,457	\$	27,457
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$		\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 11,767	\$ 11,767	\$ 11,767	\$	11,767
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$ 77,642	2 \$	77,642	\$ -	\$ -	\$ 77,642	\$	77,642
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 3,922	\$ 3,922	\$ 3,922	\$	3,922
TOTAL - MOE	B/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	77,642		\$ 622,679		\$	700,321

Page 58 of 60 N. In. Rotterdam SS

System Upgrade Facilities (Various Stations for Edic/Marcy to New Scotland)

Estimate Revision: 5 Total: \$ 6,899,000

SYSTEM UPGR	ADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF SS1	Marcy 345kV Bay 3300 - Reconductor Strain Bus UNS-18 Marcy-New Scotland Line	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 664,560	\$ 665,000
SUF SS1	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 30,000
SUF SS1	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 174,000
SUF SS1	SUF SS1 - TOTAL:				\$ -		\$ -		\$ 869,000
SUF SS2	Marcy 345kV Bay 3100 - Reconductor Strain Bus, Replace (3) breakers and wave trap UE1-7- Marcy-Edic Line	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 2,946,086	\$ 2,947,000
SUF SS2	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 120,720	\$ 121,000
SUF SS2	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 767,000
SUF SS2	SUFSS 2 - TOTAL:				\$ -		\$ -		\$ 3,835,000
SUF SS3	Edic 345kV Bay - UE1-7- Marcy-Edic Line Replace (2) breakers and wave trap	1	LS					\$ 1,661,294	\$ 1,662,000
SUF SS3	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 93,120	\$ 94,000
SUF SS3	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 439,000
SUF SS3	SUF SS3 - TOTAL:				\$ -		\$ -		\$ 2,195,000
SUF SS4			LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS4	Removals		LS %					\$ -	\$ -
SUF SS4	Engineering, T&C, PM, Indirects (25%)		LS %						\$ -
SUF SS4	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
SUF SS5		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS5	Removals		LS %					\$ -	\$ -
SUF SS5	Engineering, T&C, PM, Indirects (25%)		LS %						\$ -
SUF SS5	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
	STATIONS SUF DIRECT TOTAL:								\$ 5,519,000
	STATIONS SUF INDIRECT TOTAL:								\$ 1,380,000
	STATIONS SUF TOTAL								\$ 6,899,000

ESTIMATE ASSUMPTIONS & CLARIFICATIONS

- 1 Cost Estimate is based on 2017 rates.
- Construction schedule is in accordance with proposed schedule we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
- 3 We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
- 4 All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
- 5 We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type.
- Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
- Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
- 8 Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
- 9 A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
- 10 We have assumed that all project details provided are accurate unless noted otherwise.
- 11 Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
- 12 A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
- A contractor allowance of 4.644% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
- 14 An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
- 15 A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
- 16 An allowance of 5% for transmission design and engineering has been included in the total section.
- 17 An allowance of 8% for substation design and engineering has been included in the total section.
- 18 An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
- 19 An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
- 20 An allowance of 3.75% for substation testing and commissioning has been included in the total section.
- 21 An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
- 22 New York state sales tax of 8% is included in all material pricing.
- 23 An allowance of 1.5% for insurance is included in the DPS sheet.
- 24 The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.



		NY Power Authority and North American Transmission (T027)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$56,801
	1.2	Foundations	\$31,116
	1.3	Structures	\$106,166
	1.4	Conductor, Shiedwire and OPGW	\$62,279
	1.5	Insulators, Fitting and Hardwares	\$26,553
		Subtotal (1)	\$282,915
	2	Substations	
l st	2.1	Rotterdam Substation	\$47,340
t C	2.2	Edic Substation	\$5,333
Direct Cost	2.3	Princetown Substation	\$29,872
^	2.4	New Scotland Substation	\$7,717
	2.5	Porter Substation	\$546
	2.6	Knickerbocker Substation	\$0
	2.7	Marcy Substation	\$0
	2.8	Substation Interconnections	\$8,301
		Subtotal (2)	\$99,109
		Total (1+2)	\$382,023
		Contractors Mark-up (15% of Total 1+2)	\$57,303
		Total Direct Cost (A)	\$439,327
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$3,820
	3.2	Project Management, Material Handling & Amenities	\$22,160
Cos	3.3	Engineering	\$25,712
Indirect Cost	3.4	Testing & Commissioning	\$2,532
Indii	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$26,200
	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$17,838
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$8,278
		Total Indirect Cost (3)	\$106,541
		Subtotal Project Cost (B=A+3) 2017 \$	\$545,867
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project (Marcy and Edic Terminals)	\$7,727
	4.2	NUF identified during Evaluation	\$0
		Subtotal NUF Cost (C)	\$7,727
		Total Project Cost (B+C) 2017 \$	\$553,594
		Total Project Cost 2018 \$	\$570,202

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NAT & NYPA - T027 - (Segment A, Double Circuit)

Estimate Revision: 5

	NAT & NYPA - T027 - (Segment A, Double Circuit) - Direct Costs	Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Edic to Princetown	\$ 192,806,381
Direct Labor, Material & Equipment Costs	B. Transmission Line Princetown to Rotterdam	\$ 20,488,282
Direct Labor, Material & Equipment Costs	C. Transmission Line Princetown to New Scotland	\$ 69,619,908
Direct Labor, Material & Equipment Costs	D. Rotterdam Substation - Install	\$ 43,728,474
Direct Labor, Material & Equipment Costs	E. Rotterdam Substation - Removal	\$ 3,611,030
Direct Labor, Material & Equipment Costs	F. Edic Substation - Install	\$ 5,211,229
Direct Labor, Material & Equipment Costs	G. Edic Substation - Removal	\$ 122,000
Direct Labor, Material & Equipment Costs	H. New Scotland Substation - Install	\$ 7,635,864
Direct Labor, Material & Equipment Costs	I. New Scotland Substation - Removal	\$ 81,300
Direct Labor, Material & Equipment Costs	J. Porter Substation - Install	\$ 71,912
Direct Labor, Material & Equipment Costs	K. Porter Substation - Removal	\$ 474,313
Direct Labor, Material & Equipment Costs	L. Interconnection Edic Station	\$ 1,784,075
Direct Labor, Material & Equipment Costs	M. Interconnection New Scotland Station	\$ 2,594,271
Direct Labor, Material & Equipment Costs	N. Interconnection Rotterdam Station	\$ 3,922,412
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$ -
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$ 5,519,000
Direct Labor, Material & Equipment Costs	Q. Princetown GIS Substation - Install	\$ 29,871,757
	SUBTOTAL:	\$ 387,542,208
	CONTRACTOR MARK-UP (OH&P)	\$ 58,131,331
	CONTINGENCY ON ENTIRE PROJECT	\$ -
	TOTAL DIRECT:	\$ 445,673,540

	NAT & NYPA - T027 - (Segment A, Double Circuit) - Indirect Costs	To	otal Each Segment
Indirect Costs	A. Transmission Line Edic to Princetown	\$	57,168,362
Indirect Costs	B. Transmission Line Princetown to Rotterdam	\$	4,270,750
Indirect Costs	C. Transmission Line Princetown to New Scotland	\$	14,073,805
Indirect Costs	D. Rotterdam Substation - Install	\$	10,272,954
Indirect Costs	E. Rotterdam Substation - Removal	\$	548,904
Indirect Costs	F. Edic Substation - Install	\$	1,207,020
Indirect Costs	G. Edic Substation - Removal	\$	18,423
Indirect Costs	H. New Scotland Substation - Install	\$	1,746,869
Indirect Costs	I. New Scotland Substation - Removal	\$	12,277
Indirect Costs	J. Porter Substation - Install	\$	14,217
Indirect Costs	K. Porter Substation - Removal	\$	71,625
Indirect Costs	L. Interconnection Edic Station	\$	320,046
Indirect Costs	M. Interconnection New Scotland Station	\$	480,828
Indirect Costs	N. Interconnection Rotterdam Station	\$	638,929
Indirect Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Indirect Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	1,380,000
Indirect Costs	Q. Princetown GIS Substation - Install	\$	7,418,414
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitagation)	\$	8,277,824
	TOTAL INDIREC	T: \$	107,921,245

TOTAL ESTIMATED COST: \$ 553,594,785

NAT & NYPA - T027 - (Segment A, Double Circuit)

A. Transmission Line Edic to Princetown

Estimate Revision: 5 Total: \$ 249,974,743

NAT & NYPA - T027 - (S	egment	A, Double Circuit)				
		Supply		Installation		Total
A. Transmission Line Edic to Princetown						
1. CLEARING & ACCESS	\$	75,250	\$	41,489,402	\$	41,564,652
2. FOUNDATIONS	\$	3,930,221	\$	14,264,968	\$	18,195,189
3. STRUCTURES	\$	34,672,483	\$	35,692,215	\$	70,364,698
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	9,535,493	\$	34,842,335	\$	44,377,828
5. INSULATORS, FITTINGS, HARDWARE	\$	12,595,660	\$	5,708,354	\$	18,304,014
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	4,864,729	\$	52,303,633	\$	57,168,362
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	65,673,835	\$	184,300,907	\$	249,974,743
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	
TOTAL:	Ś	65.673.835	Ś	184.300.907	Ś	249.974.743

0.0%

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Trans	mission Line Edic to Princetown								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	198.0	Acre		\$ -	\$ 5,000	\$ 990,000	\$ 5,000	\$ 990,000
1.3	Permanent Access Road	83,001.6	LF	\$ -	\$ -	\$ 45		\$ 45	
	Silt Fence	415,008	LF	\$ -	\$ -		\$ 1,660,032		\$ 1,660,032
1.5	Matting - Access and ROW	332,006.4	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	29,325	LF	\$ -	\$ -	\$ 70		\$ 70	
1.7	Snow Removal	78.6	Mile	\$ -	\$ -	\$ 16,000	\$ 1,257,600	\$ 16,000	
1.8	ROW Restoration	78.6	Mile	\$ -	\$ -	\$ 10,000	\$ 786,000	\$ 10,000	
1.9	Work Pads	1,955,000	SF SF	\$ - \$ -	\$ -	\$ 4			\$ 6,881,600
1.10 1.11	Restoration for Work Pad areas	391,000	EA EA	\$ -	\$ -	\$ 0.15 \$ 20,035	\$ 58,650 \$ -	\$ 0	\$ 58,650 \$ -
1.11	Temporary Access Bridge Air Bridge	-	EA	\$ -	\$ - \$ -		\$ -	\$ 20,033	
1.13	Stabilized Construction Entrance	50	EA	\$ -	\$ -		\$ 229,000	\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	100	EA	\$ -	\$ -	7 .,	\$ 413,000	\$ 4,130	
1.15	Culverts / Misc. Access	55	EA	\$ 750	\$ 41,250		\$ 68,750	\$ 2,000	
1.16	Gates	17	EA	\$ 2,000	\$ 34,000	\$ 2,500	\$ 42,500	\$ 4,500	
1.17	Concrete Washout Station	40	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
TOTAL - CLEAR	RING & ACCESS:				\$ 75,250		\$ 41,489,402	,	\$ 41,564,652
2. FOUNDATIO	DNS								
2.1	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°)	4	EA	\$ 9,391	\$ 37,565	\$ 63,861	\$ 255,442	\$ 73,252	\$ 293,007
2.2	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	10	EA	\$ 3,622	\$ 36,218	\$ 24,628	\$ 246,279	\$ 28,250	\$ 282,497
2.3	1-CKT 345KV VERTICAL TANGENT (0°-1°)	76	EA	\$ 2,542	\$ 193,221	\$ 17,288	\$ 1,313,899	\$ 19,831	\$ 1,507,120
2.4	2-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	26	EA	\$ 3,845	\$ 99,957	\$ 26,143	\$ 679,708	\$ 29,987	\$ 779,665
2.5	2-CKT 345KV VERTICAL TANGENT (0°-1°)	233	EA	\$ 2,863	\$ 667,021	\$ 19,467	\$ 4,535,741	\$ 22,329	\$ 5,202,762
2.6	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	20	EA	\$ 72,091	\$ 1,441,825	\$ 80,164	\$ 1,603,275	\$ 152,255	\$ 3,045,099
2.7	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	22	EA	\$ 66,110	\$ 1,454,415	\$ 73,512	\$ 1,617,275	\$ 139,622	\$ 3,071,690
2.8	Rock Excavation Adder	2,006.675	СУ	\$ -	\$ -	\$ 2,000	\$ 4,013,350	\$ 2,000	\$ 4,013,350
2.9			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.10			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.11			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.12			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.13			EA	\$ -	\$ -	\$ -	\$ -	s -	s -
2.14			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
			= -	•					Page 3 of 63

Item	Item Description	Estimated Quantity	Unit of Measure	r	Material Supply Rate	N	Naterial Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment	:	Total Unit Rate		TOTAL
2.15			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.16			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.17			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.18			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.19			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.20			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.21			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.22			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.23			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.24			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.26			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.27			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.28			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.29			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.30			EA	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
2.31			-							I			
TOTAL - FOUN	DATIONS:					\$	3,930,221		\$ 14,264,96	8		\$	18,195,189
3. STRUCTURE	S												
3.1	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) 80'	4	Structure	\$	69,079	\$	276,316	\$ 41,447	\$ 165,79	0 \$	110,526	\$	442,106
3.2	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) 115'-150'	20	Structure	\$	139,161	\$	2,783,214	\$ 83,496	\$ 1,669,92	8 \$	222,657	\$	4,453,142
3.3	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) 130'-135'	10	Structure	\$	87,960	\$	879,601	\$ 52,776	\$ 527,76	1 \$	140,736	\$	1,407,362
3.4	1-CKT 345KV VERTICAL TANGENT (0°-1°) 115'-145'	73	Structure	\$	57,278	\$	4,181,283	\$ 34,367	\$ 2,508,77	0 \$	91,645	\$	6,690,053
3.5	1-CKT 345KV VERTICAL TANGENT (0°-1°) HD 130'	2	Structure	\$	67,026	\$	134,051	\$ 40,215	\$ 80,43	1 \$	107,241	\$	214,482
3.6	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) 115'-145'	23	Structure	\$	198,553	\$	4,566,721	\$ 119,132	\$ 2,740,03	3 \$	317,685	\$	7,306,754
3.7	2-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) 125'-155'	26	Structure	\$	119,083	\$	3,096,149	\$ 71,450	\$ 1,857,68	9 \$	190,532	\$	4,953,838
3.8	2-CKT 345KV VERTICAL TANGENT (0°-1°) 115'-155'	233	Structure	\$	79,628	\$	18,553,254	\$ 47,777	\$ 11,131,95	2 \$	127,404	\$	29,685,207
3.9	Remove Existing Foundation	50	EA	\$		\$	-	\$ 7,500	\$ 375,00	0 \$	7,500	\$	375,000
3.10	Remove Existing Structure and Accessories	994	EA	\$	-	\$	-	\$ 12,500	\$ 12,425,00	0 \$	12,500	\$	12,425,000
3.11	Install Grounding and Grounding Accessories	399	Pole	\$	506	\$	201,894	\$ 5,539	\$ 2,209,86	2 \$	6,045	\$	2,411,756
3.12													
3.13													
3.14													
3.15													
TOTAL - STRUC	CTURES:					\$	34,672,483		\$ 35,692,21	5		\$	70,364,698
4. CONDUCTO	R, SHIELDWIRE, OPGW												
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	4,563,821	LF	\$	1.90	\$	8,671,260	\$ 5.00	\$ 22,819,10	5 \$	6.90	\$	31,490,365
4.2	(1) OPGW 36 Fiber AC-33/38/571	390,298	LF	\$	1.35	\$	526,902	\$ 5.00	\$ 1,951,49	0 \$	6.35	\$	2,478,392
4.3	(1) 3/8" EHS7 Steel	371,448	LF	\$	0.47	\$	174,581	\$ 5.00	\$ 1,857,24	0 \$	5.47	\$	2,031,821
4.4													
4.5				1						\perp			
4.6				1		<u> </u>				1			
4.7	Remove Existing Conductor and Accessories	140.0	Mile	\$	-	\$	-		\$ 4,200,00	_		\$	4,200,000
4.8	Remove Existing OPGW and Accessories	140.0	Mile	\$	-	\$	-	, , , , , , , , , , , , , , , , , , , ,	\$ 1,680,00		,	\$	1,680,000
4.9	Remove Existing OHSW and Accessories	140.0	Mile	\$	-	\$	-	\$ 12,000	\$ 1,680,00	0 \$	12,000.00	\$	1,680,000
4.10				1						\perp			
4.11				1		<u> </u>				\perp			
4.12				1		_				\perp		L.	
	Rider Poles (187 Locations)	93	Set	\$	1,750	-	162,750					_	488,250
-	Rider Poles - Relocated	94	Set	\$	-	\$	-	\$ 3,500	\$ 329,00	0 \$	3,500.00	\$	329,000
4.15										\perp			
	JCTOR, SHIELDWIRE, OPGW:					\$	9,535,493		\$ 34,842,33	5		\$	44,377,828
	FITTINGS, HARDWARE												
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	3,696	Assembly	\$	1,800	\$	6,652,800	\$ 720	\$ 2,661,12	0 \$	2,520	\$	9,313,920

Item	Item Description	Estimated Quantity	Unit of Measure	N	Material Supply Rate	M	aterial Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total	Unit Rate		TOTAL
5.2	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	1,020	Assembly	\$	1,800	\$	1,836,000	\$ 720	\$ 734,400	\$	2,520	\$	2,570,400
5.3			Assembly			\$	-		\$ -	\$	-	\$	-
5.4	OPGW Assembly - Tangent	345	Assembly	\$	200	\$	69,000	\$ 150	\$ 51,750	\$	350	\$	120,750
5.5	OPGW Assembly - Angle / DE	92	Assembly	\$	250	\$	23,000	\$ 150	\$ 13,800	\$	400	\$	36,800
5.6	OHSW Assembly - Tangent	259	Assembly	\$	200	\$	51,800	\$ 150	\$ 38,850	\$	350	\$	90,650
5.7	OHSW Assembly - Angle / DE	44	Assembly	\$	250	\$	11,000	\$ 150	\$ 6,600	\$	400	\$	17,600
5.8	OPGW Splice Boxes	27	Assembly	\$	1,746	\$	47,146	\$ 2,274	\$ 61,398	\$	4,020	\$	108,544
5.9	OPGW Splice & Test	27	EA	\$	2,520	\$	68,040	\$ 2,520	\$ 68,040	\$	5,040	\$	136,080
5.10	Spacer - Conductor	21,901	EA	\$	50	\$	1,095,050	\$ 35	\$ 766,535	\$	85	\$	1,861,585
5.11	Vibration Dampers - Conductor	4,692	EA	\$	35	\$	164,220	\$ 35	\$ 164,220	\$	70	\$	328,440
5.12	Shield wire / OPGW Dampers, Misc. Fittings	784	EA	\$	27	\$	21,168	\$ 35	\$ 27,440	\$	62	\$	48,608
	Jumpers at Existing Structures (New Cable to Existing)	3	EA	\$	25,000	\$	75,000	\$ 25,000	\$ 75,000	\$	50,000	\$	150,000
	Replace - Mono Pole Vertical Tangent (1-Group of 18-Bells Each Assembly)	960	Assembly	\$	1,800	\$	1,728,000	\$ 720	\$ 691,200	\$	2,520	\$	2,419,200
	Replace - Dead-end & Angle Insulators (1, Group of 18-Bells Each Assembly)	390	Assembly	\$	1,800	Ś	702,000	\$ 720	\$ 280,800	Ś	2,520	Ś	982,800
	Guys, Anchors, and Accessories	-	EA	\$	719	Ś	-	\$ 883	\$ -	Ś	1,602	Ś	-
	Misc. materials (Signs and Markers)	66.8	Mile	\$		\$	51,436	\$ 1,006	\$ 67,201	\$	1,776	\$	118,637
5.18				Ť		7	53,155	7 -,,,,,	+ 0.,	T	-,	· ·	
	ATORS, FITTINGS, HARDWARE:					\$	12,595,660		\$ 5,708,354			\$	18,304,014
						Ś						Ś	
	nission Line Edic to Princetown					Ş	60,809,107		\$ 131,997,274			>	192,806,381
6. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:												
	Contractor Mobilization / Demobilization												
	Mob / Demob Project Management, Material Handling & Amenities	1.0	LS	\$	-	\$	-	\$ 1,928,064	\$ 1,928,064	\$	1,928,064	\$	1,928,064
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			Ś			\$ 7,328,089 \$ 1,928,064		7,328,089		7,328,089 1,928,064
0.5	Utility PM and Project Oversite	1	LS			Ş	-	\$ 1,928,064	\$ 1,928,064	۶	1,928,064	\$	1,928,004
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$	-	\$ 1,928,064	\$ 1,928,064	\$	1,928,064	\$	1,928,064
	Engineering												
6.5	Design Engineering	1	LS	\$	-	\$	-	\$ 9,640,319	\$ 9,640,319	\$	9,640,319	\$	9,640,319
6.6	LiDAR	1	LS	\$	-	\$	-	\$ 578,419	\$ 578,419	\$	578,419	\$	578,419
6.7	Geotech	67	Location	\$	-	\$	-	\$ 3,500	\$ 234,500	\$	3,500	\$	234,500
6.8	Surveying/Staking	1	LS	\$	-	\$	-	\$ 1,349,645	\$ 1,349,645	\$	1,349,645	\$	1,349,645
	Testing & Commissioning												
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$	-	\$ 40,000	\$ 40,000	\$	40,000	\$	40,000
	Permitting and Additional Costs												
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
6.11	Environmental Mitigation	-	LS	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 578,419	\$ 578,419	\$	578,419	\$	578,419
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$	-	\$ 8,739,000	\$ 8,739,000	\$	8,739,000	\$	8,739,000
	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$ -	\$	-	\$	-
	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$ -	\$	-	\$	
	Compensation for use of 2 Ckts - NYPA Structures (92 Structures)	1	LS	\$		Ś	-	\$ 17,838,245	\$ 17,838,245		17,838,245	\$	17,838,245
	Sales Tax on Materials	1	LS	Ś		Ś	4,864,729	\$ -	\$ -	Ś		Ś	4,864,729
	Fees for permits, including roadway, railroad, building or other local permits	1	LS	+-		Ś	.,,,	\$ 192,806	\$ 192,806	т	192,806	Ś	192,806
	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	-	25			Ś	4,864,729	- 152,000	\$ 52,303,633	Ť	152,000	Ś	57,168,362
J.AL 11100/L	zamos, artemazamito, i amini i into, i uto, i in u into incers.					Y	4,004,723		9 32,303,033			Υ	37,100,302

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B. Transmission Line Princetown to Rotterdam

Estimate Revision: 5 Total: \$ 24,759,032

NAT & NYPA - T026 - (Segment A	I, Base)			
		Supply	Installation	Total
B. Transmission Line Princetown to Rotterdam				
1. CLEARING & ACCESS	\$	6,000	\$ 3,038,200	\$ 3,044,200
2. FOUNDATIONS	\$	417,002	\$ 3,778,708	\$ 4,195,711
3. STRUCTURES	\$	3,876,135	\$ 4,280,943	\$ 8,157,078
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	722,365	\$ 2,620,705	\$ 3,343,070
5. INSULATORS, FITTINGS, HARDWARE	\$	1,199,031	\$ 549,192	\$ 1,748,223
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	497,643	\$ 3,773,107	\$ 4,270,750
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	6,718,177	\$ 18,040,855	\$ 24,759,032
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	6,718,177	18,040,855	24,759,032

escription of Work:			

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Transı	mission Line Princetown to Rotterdam								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	24.0	Acre	\$ -	\$ -	\$ 5,000	-	,	
1.3	Access Road	5,280	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	26,400	LF	\$ -	\$ -		\$ 105,600		
1.5	Matting - Access and ROW	21,120	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	2,775	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	5	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	5	Mile	\$ -	\$ -	\$ 10,000			. ,
1.9	Work Pads	185,000	SF	\$ -	\$ -	\$ 4			\$ 651,200
1.10	Restoration for Work Pad areas	37,000	SF	\$ -	\$ -	\$ 0.2			\$ 5,550
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	10	EA	\$ -	\$ -	\$ 4,580			
1.14	Maintenance and Protection of Traffic on Public Roads	10	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	8	EA	\$ 750					
1.17	Concrete Washout Station ING & ACCESS:	10	EA	\$ -	\$ - \$ 6,000	\$ 1,850	\$ 18,500 \$ 3,038,200	\$ 1,850	\$ 18,500 \$ 3,044,200
2. FOUNDATIO					\$ 6,000		\$ 3,038,200		\$ 3,044,200
2. FOUNDATIO 2.1	Direct Embed Foundations - 6' x 18'	56	EA	\$ 1,857	\$ 104,018	\$ 18,603	\$ 1,041,794	\$ 20,461	\$ 1,145,812
2.1	Direct Embed Foundations - 6 x 18 Direct Embed Foundations - 6' x 20'	30 4	EA	\$ 2,046	\$ 104,018	\$ 20,562			
2.3	Direct Embed Foundations - 6' x 22'	8	EA EA	\$ 2,046					
2.4	Direct Embed Foundations - 7' x 25'	4	EA	\$ 3,105			·		
2.5	Drilled Pier - 6' x 19'	6	EA	\$ 17,204	\$ 103,223	\$ 17,391	\$ 104,347	\$ 34,595	\$ 207,570
2.6	Drilled Pier - 8' x 27'	4	EA	\$ 42,819	\$ 171,274	\$ 57,340	\$ 229,359	\$ 100,158	\$ 400,633
2.7	Rock Excavation Adder	1,001.1	CY	\$ -	\$ -	\$ 2,000	\$ 2,002,200	\$ 2,000	\$ 2,002,200
TOTAL - FOUN	DATIONS:				\$ 417,002		\$ 3,778,708		\$ 4,195,711
3. STRUCTURE	S								
3.1	2x 1-CKT 345KV DELTA TANGENT (0°-1°) - 115'	24	Structure	\$ 85,544	\$ 2,053,056	\$ 51,326	\$ 1,231,834	\$ 136,870	\$ 3,284,890
3.2	2x 1-CKT 345KV DELTA TANGENT (0°-1°) - 135'	2	Structure	\$ 106,005	\$ 212,010	\$ 63,603	\$ 127,206	\$ 169,608	\$ 339,216
3.3	2x 1-CKT 345KV DELTA SMALL ANGLE (1°-15°) - 115'	2	Structure	\$ 141,673	\$ 283,346	\$ 85,004	\$ 170,008	\$ 226,677	\$ 453,354
3.4	2x 1-CKT 345KV VERTICAL TANGENT DEADEND (0°-5°) - 115'	4	Structure	\$ 109,816	\$ 439,264	\$ 65,890			
	2x 1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	2	Structure	\$ 232,656	\$ 465,312	\$ 139,594			
3.6		1		\$ 176,342	\$ 176,342	\$ 105,805	\$ 105,805		
	2x 1-CKT 345KV 3-POLE LARGE ANGLE DEADEND (60°-90°) - 115'		Structure		, ,				
3.7	2x 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 65′	1	Structure	\$ 99,493	\$ 99,493	\$ 59,696	\$ 59,696	\$ 159,189	\$ 159,189

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.8	2x 1-CKT 345KV DELTA TANGENT (0°-1°) HD- 115'	1	Structure	\$	105,820	\$ 105,820	\$ 63,492	\$ 63,492	\$ 169,312	\$ 169,312
3.9	Remove Existing Foundation	22	EA	\$	-	\$ -	\$ 7,500	\$ 163,500	\$ 7,500	\$ 163,500
3.10	Remove Existing Structure and Accessories	109	EA	\$	-	\$ -	\$ 12,500	\$ 1,362,500	T ==,000	\$ 1,362,500
3.11	Install Grounding and Grounding Accessories	82	Pole	\$	506	\$ 41,492	\$ 5,539	\$ 454,157	\$ 6,045	\$ 495,649
	CTURES PRINCTOWN TO NEW SCOTLAND:					\$ 3,876,135		\$ 4,280,943		\$ 8,157,078
-	R, SHIELDWIRE, OPGW	222.222	15		4.00	A	A 5.00	4 505 455	4 600	A 224 422
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (R1 - R36)	339,293	LF	\$	1.90	\$ 644,657	\$ 5.00	\$ 1,696,465		\$ 2,341,122
4.2	(1) OPGW 36 Fiber AC-33/38/571 (R1 - R36)	28,274	LF	\$		\$ 38,170	\$ 5.00	\$ 141,370	•	\$ 179,540
4.3	(1) 3/8" EHS7 Steel (R1 - R36)	28,274	LF	\$	0.47			\$ 141,370		
4.5	Remove Existing Conductor and Accessories	10.0	Mile	\$		\$ -	\$ 30,000	\$ 300,000	\$ 30,000.00	
4.6	Remove Existing OPGW and Accessories	10.0	Mile	\$		\$ - \$ -	\$ 12,000	\$ 120,000		\$ 120,000
4.7	Remove Existing OHSW and Accessories Rider Poles	10.0 15	Mile EA	\$	1,750		\$ 12,000 \$ 3,500	\$ 120,000 \$ 52,500	, ,	\$ 120,000 \$ 78,750
4.9	Rider Poles - Relocated	14	Set	Ś		\$ 20,230	\$ 3,500	\$ 49,000	\$ 3,500.00	
	JCTOR, SHIELDWIRE, OPGW:	14	Jet	٠	-	\$ 722,365	3,300 ب	\$ 2,620,705	y 5,300.00	\$ 3,343,070
	FITTINGS, HARDWARE					7 /22,365		2,020,705		3,343,070
		348	Anne lali -	s	4.000	ć coc 400	ć 700	\$ 250,560	\$ 2,520	\$ 876,960
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)		Assembly	-	1,800		\$ 720	+ ===,===		· · · · · · · · · · · · · · · · · · ·
5.2	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	240	Assembly	\$	1,800	\$ 432,000	\$ 720	\$ 172,800		\$ 604,800
5.3	OPGW Assembly - Tangent	29	Assembly	\$	200	\$ 5,800	\$ 150	\$ 4,350	\$ 350	\$ 10,150
5.4	OPGW Assembly - Angle / DE	16	Assembly	\$	250	\$ 4,000	\$ 150	\$ 2,400		\$ 6,400
5.5	OHSW Assembly - Tangent	29	Assembly	\$	200	\$ 5,800	\$ 150	\$ 4,350	•	\$ 10,150
5.6	OHSW Assembly - Angle / DE	16	Assembly	\$	250	\$ 4,000	\$ 150	\$ 2,400	7	\$ 6,400
5.7	OPGW Splice Boxes	8	Assembly	\$	1,746		\$ 2,274			\$ 32,161
5.8	OPGW Splice & Test	8	EA	\$	2,520	\$ 20,160	\$ 2,520	\$ 20,160	\$ 5,040	\$ 40,320
5.9	Spacer - Conductor	1,002	EA	\$	50	\$ 50,100	\$ 35	\$ 35,070	\$ 85	\$ 85,170
5.10	Vibration Dampers - Conductor	852	EA	\$	35	\$ 29,820	\$ 35	\$ 29,820	\$ 70	\$ 59,640
5.11	Shieldwire / OPGW Dampers, Misc. Fittings	116	EA	\$	27	\$ 3,132	\$ 35	\$ 4,060	\$ 62	\$ 7,192
5.12	Guys, Anchors, and Accessories	-	EA	\$	912	\$ -	\$ 1,058	\$ -	\$ 1,970	\$ -
5.13	Misc. materials (Signs and Markers)	5.0	Mile	\$	770	\$ 3,850	\$ 1,006	\$ 5,030	\$ 1,776	\$ 8,880
TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:					\$ 1,199,031		\$ 549,192		\$ 1,748,223
B. Trans	mission Line Princetown to Rotterdam					\$ 6,220,534		\$ 14,267,748		\$ 20,488,282
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS									
	Contractor Mobilization / Demobilization			1						
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 204,883	\$ 204,883	\$ 204,883	\$ 204,883
	Project Management, Material Handling & Amenities			+						
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 778,708	\$ 778,708	\$ 778,708	\$ 778,708
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 204,883	\$ 204,883	\$ 204,883	\$ 204,883
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 204,883	\$ 204,883		\$ 204,883
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 1,024,414	\$ 1,024,414	\$ 1,024,414	\$ 1,024,414
6.6	LIDAR	1	LS	\$	-	\$ -	\$ 61,465	\$ 61,465	\$ 61,465	\$ 61,465
6.7	Geotech	5	Location	\$	-	\$ -	\$ 3,500	\$ 17,500	\$ 3,500	\$ 17,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 143,418	\$ 143,418	\$ 143,418	\$ 143,418
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs		, -	1		•	A	_	•	•
6.10	Environmental Licensing & Permitting Costs	-	LS	\$		\$ -	\$ -			\$ -
6.11	Environmental Mitigation	-	LS	\$		\$ -	\$ -	\$ -		\$ -
6.12	Warranties / LOC's	1	LS	\$			\$ 61,465			
6.13	Real Estate Costs (New ROW)	1	LS	\$		\$ -	\$ -	\$ -		\$ - \$ 1,011,000
6.14 6.15	Real Estate Costs (Incumbent Utility ROW) Legal Fees	1	LS LS	\$		\$ - \$ -		\$ 1,011,000 \$ -		
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$			\$ - \$ -			\$ - \$ -
6.17	Amovance for Fanas osed burning construction (Art obe)	-	LS	\$		•	\$ -			\$ -
				1 7		τ	Ŧ	+		Page 7 of 63

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.18	Sales Tax on Materials	1	LS	\$ 497,643	\$ 497,643	\$ -	\$ -	\$ 497,643	\$ 497,643
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 20,488	\$ 20,488	\$ 20,488	\$ 20,488
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 497,643		\$ 3,773,107		\$ 4,270,750

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B. TL Princetown-Rotterdam

NAT & NYPA - T027 - (Segment A, Double Circuit)

C. Transmission Line Princetown to New Scotland

Estimate Revision: 5 Total: \$ 83,693,713

NAT & NYPA - T027 - (Segment A, D	ouble Circ	cuit)		
		Supply	Installation	Total
C. Transmission Line Princetown to New Scotland				
1. CLEARING & ACCESS	\$	31,000	\$ 12,160,694	\$ 12,191,694
2. FOUNDATIONS	\$	1,906,579	\$ 6,818,398	\$ 8,724,977
3. STRUCTURES	\$	14,926,511	\$ 12,717,400	\$ 27,643,911
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,406,079	\$ 11,152,295	\$ 14,558,374
5. INSULATORS, FITTINGS, HARDWARE	\$	4,435,513	\$ 2,065,439	\$ 6,500,952
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,976,455	\$ 12,097,350	\$ 14,073,805
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	26,682,137	\$ 57,011,576	\$ 83,693,713
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	26,682,137	\$ 57,011,576	\$ 83,693,713

Description	of Work:	20,002,137	\$ 57,011,576	00,030,710					
Description	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s								
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Trans	mission Line Princetown to New Scotland								
1. CLEARING	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	64.0	Acre	\$ -	\$ -	\$ 5,000			
1.3	Permanent Access Road	20,803.2	LF	\$ -	\$ -	\$ 45			\$ 936,144
1.4	Silt Fence	104,016.0	LF	\$ -	\$ -	\$ 4			
1.5	Matting - Access and ROW	83,212.8	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	12,450	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	19.7	Mile	\$ -	\$ - \$ -	\$ 16,000 \$ 10,000			
1.8	ROW Restoration Work Pads	19.7 830,000	Mile SF	\$ - \$ -	\$ - \$ -	,	\$ 197,000 \$ 2,921,600		
1.10	Restoration for Work Pad areas	166,000	SF SF	\$ -	\$ -	\$ 0.2			
1.11	Temporary Access Bridge	100,000	EA EA	\$ -	\$ -	\$ 20,035		\$ 20,035	· · · · · · · · · · · · · · · · · · ·
1.12	Air Bridge	2	EA	\$ -	\$ -	\$ 20,033			
1.13	Stabilized Construction Entrance	-	EA	\$ -	Š -	\$ 4,580		\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	50	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	11	EA	\$ 2,000	·				
1.16	Culverts / Misc. Access	12	EA	\$ 750					
1.17	Concrete Washout Station	30	EA	\$ -	\$ -	\$ 1,850	\$ 55,500	\$ 1,850	\$ 55,500
TOTAL - CLEA	RING & ACCESS:				\$ 31,000		\$ 12,160,694		\$ 12,191,694
2. FOUNDATI	DNS								
2.1	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	2	EA	\$ 4,993	\$ 9,985	\$ 33,950	\$ 67,900	\$ 38,942	\$ 77,885
2.2	1-CKT 345KV VERTICAL TANGENT (0°-1°)	33	EA	\$ 4,364	\$ 144,020	\$ 29,677	\$ 979,338	\$ 34,041	\$ 1,123,358
2.3	2-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	7	EA	\$ 3,880	\$ 27,162	\$ 26,386	\$ 184,700	\$ 30,266	\$ 211,862
2.4	2-CKT 345KV VERTICAL TANGENT (0°-1°)	105	EA	\$ 2,848	\$ 299,001	\$ 19,364	\$ 2,033,204	\$ 22,211	\$ 2,332,205
2.5	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	3	EA	\$ 58,386	\$ 175,157	\$ 64,912	\$ 194,736	\$ 123,297	\$ 369,892
2.6	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	16	EA	\$ 78,203	\$ 1,251,255	\$ 86,945	\$ 1,391,121	\$ 165,148	\$ 2,642,376
2.7	Rock Excavation Adder	983.7	СУ	\$ -	\$ -	\$ 2,000	\$ 1,967,400	\$ 2,000	\$ 1,967,400
2.8									
2.9									
2.10									
2.11									
2.12									
2.13									
2.14									
2.15									

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.16									
2.17									
2.18									
2.19									
2.20									
2.21									
2.22									
2.23 TOTAL - FOUN	DATIONS:				\$ 1,906,579		\$ 6,818,398		\$ 8,724,977
3. STRUCTURE					3 1,500,575		\$ 0,010,330		3 0,724,377
3.1	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) 115'	3	Structure	\$ 116,328	\$ 348,984	\$ 69,797	\$ 209,390	\$ 186,125	\$ 558,374
3.2	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) 130'	2	Structure	\$ 85,082	\$ 170,163		\$ 102,098		\$ 272,261
3.3	1-CKT 345KV VERTICAL TANGENT (0°-1°) 115'-135'	33	Structure	\$ 56,569	\$ 1,866,787		\$ 1,120,072		\$ 2,986,859
3.4	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) 115'-145'	16	Structure	\$ 201,043	\$ 3,216,691		\$ 1,930,015		\$ 5,146,706
3.5	2-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) 115'-165'	7	Structure	\$ 124,542	\$ 871,794		\$ 523,076	\$ 199,267	\$ 1,394,870
3.6	2-CKT 345KV VERTICAL TANGENT (0°-1°) 115'-145'	105	Structure	\$ 79,696	\$ 8,368,096	\$ 47,818	\$ 5,020,857	\$ 127,514	\$ 13,388,953
3.7	Remove Existing Foundation	124	EA	\$ -	\$ -	\$ 7,500	\$ 930,000	\$ 7,500	\$ 930,000
3.8	Remove Existing Lattice Structure and Accessories	30	EA	\$ -	\$ -	\$ 12,500	\$ 375,000		\$ 375,000
3.9	Remove Existing Structure and Accessories	127	EA		\$ -	\$ 12,500	\$ 1,587,500		\$ 1,587,500
3.10	Install Grounding and Grounding Accessories	166	Pole	\$ 506	\$ 83,996	\$ 5,539	\$ 919,391	\$ 6,045	\$ 1,003,387
3.11									
TOTAL - STRUC					\$ 14,926,511		\$ 12,717,400		\$ 27,643,911
4. CONDUCTO	R, SHIELDWIRE, OPGW 345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	1,533,470	LF	\$ 1.90	\$ 2,913,593	\$ 5.00	\$ 7,667,350	\$ 6.90	\$ 10,580,943
4.1	(1) OPGW 36 Fiber AC-33/38/571	255,578	LF	\$ 1.35					\$ 1,622,920
4.2		220,651	LF	\$ 0.47	ć 102.70c				
4.3	(1) 3/8" EHS7 Steel			+ '			, , , , , , ,		
4.4	Remove Existing Conductor and Accessories	17.2	Mile	\$ -		\$ 30,000	\$ 516,000		
4.5	Remove Existing OPGW and Accessories	17.2	Mile	\$ -		\$ 12,000	\$ 206,400		
4.6	Remove Existing OHSW and Accessories	17.2	Mile	\$ -	\$ -	\$ 12,000	\$ 206,400		\$ 206,400
4.7	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.8	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35	\$ -	\$ 5.00	\$ -	\$ 6.35	\$ -
4.9	(1) 3/8" EHS7 Steel	-	LF	\$ 0.47	\$ -	\$ 5.00	\$ -	\$ 5.47	\$ -
4.10	Rider Poles (50 Locations)	25	EA	\$ 1,750	\$ 43,750	\$ 3,500	\$ 87,500	\$ 5,250.00	\$ 131,250
4.11	Rider Poles - Relocated	25	Set	\$ -	\$ -	\$ 3,500	\$ 87,500	\$ 3,500.00	\$ 87,500
4.12									
TOTAL - COND	UCTOR, SHIELDWIRE, OPGW:				\$ 3,406,079		\$ 11,152,295		\$ 14,558,374
	FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,554	Assembly	\$ 1,800	\$ 2,797,200		\$ 1,118,880		\$ 3,916,080
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	505	Assembly	\$ 900	\$ -	\$ 560	\$ -		\$ -
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	525	Assembly	\$ 1,800	\$ 945,000 \$ -		\$ 378,000		
5.4 5.5	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) OPGW Assembly - Tangent	147	Assembly Assembly	\$ 900 \$ 200	\$ - \$ 29,400	\$ 560 \$ 150	\$ 22,050		\$ - \$ 51,450
5.6	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	38	Assembly	\$ 250	\$ 29,400		\$ 22,030		\$ 15,200
5.7	OHSW Assembly - Tangent	112	Assembly	\$ 200	\$ 22,400		\$ 16,800		\$ 39,200
5.8	OHSW Assembly - Angle / DE	32	Assembly	\$ 250	\$ 8,000		\$ 4,800		\$ 12,800
5.9	OPGW Splice Boxes	8	Assembly				\$ 18,192		\$ 32,161
5.10	OPGW Splice & Test	8	EA	\$ 2,520	\$ 20,160		\$ 20,160		\$ 40,320
5.11	Spacer - Conductor	8,395	EA	\$ 50	\$ 419,750		\$ 293,825		\$ 713,575
5.12	Vibration Dampers - Conductor	1,536	EA	\$ 35			\$ 53,760		\$ 107,520
	Shieldwire / OPGW Dampers, Misc. Fittings	293	EA	\$ 27					
	Guys, Anchors, and Accessories	60.0	EA	\$ 719			\$ 52,997		
5.15 5.16	Misc. materials (Signs and Markers) Jumpers at Existing Structures (New Cable to Existing)	19.9	Mile	\$ 770 \$ 25.000	· ·		\$ 20,019 \$ 50,000		
	Jumpers at Existing Structures (New Cable to Existing) ATORS, FITTINGS, HARDWARE:		EA	\$ 25,000	\$ 50,000	φ 25,000	\$ 50,000		\$ 6,500,952
	nission Line Princetown to New Scotland				\$ 4,435,513		\$ 2,065,439		\$ 69,619,908
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Suppl	y Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	тс	OTAL
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 696,199	\$ 696,199	\$ 696,199	\$	696,199
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 2,646,079	\$ 2,646,079	\$ 2,646,079	\$	2,646,079
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 696,199	\$ 696,199	\$ 696,199	\$	696,199
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 696,199	\$ 696,199	\$ 696,199	\$	696,199
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 3,480,995	\$ 3,480,995	\$ 3,480,995	\$	3,480,995
6.6	Lidar	1	LS	\$	-	\$ -	\$ 208,860	\$ 208,860	\$ 208,860	\$	208,860
6.7	Geotech	20	Location	\$	-	\$ -	\$ 3,500	\$ 70,000	\$ 3,500	\$	70,000
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 487,339	\$ 487,339	\$ 487,339	\$	487,339
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 208,860	\$ 208,860	\$ 208,860	\$	208,860
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ 2,797,000	\$ 2,797,000	\$ 2,797,000	\$	2,797,000
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$ 1,97	6,455	\$ 1,976,455	\$ -	\$ -	\$ 1,976,455	\$	1,976,455
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 69,620	\$ 69,620	\$ 69,620	\$	69,620
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,976,455		\$ 12,097,350		\$	14,073,805

D. Rotterdam Substation - Install

Estimate Revision: 5 Total: \$ 54,001,428

NAT & NYPA - T027 - (Segment	A, Doul	ble Circuit)		
		Supply	Installation	Total
D. Rotterdam Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,896,891	\$ 7,763,755	\$ 10,660,646
2. SUBSTATION FOUNDATIONS	\$	2,443,003	\$ 2,616,200	\$ 5,059,203
3. SUBSTATION STRUCTURES	\$	944,980	\$ 944,980	\$ 1,889,960
4. MAJOR EQUIPTMENT	\$	11,915,000	\$ 2,970,000	\$ 14,885,000
5. SMALL EQUIPTMENT / MATERIALS	\$	1,994,540	\$ 1,060,500	\$ 3,055,040
6. CONTROL HOUSE / PANELS	\$	2,927,500	\$ 1,477,500	\$ 4,405,000
7. MISC ITEMS	\$	1,441,675	\$ 2,331,950	\$ 3,773,625
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,965,087	\$ 8,307,867	\$ 10,272,954
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	26,528,676	\$ 27,472,752	\$ 54,001,428
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	26,528,676	\$ 27,472,752	54,001,428

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Rotte	rdam Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	7.4	ACRES	\$		\$ -	\$ 203,000	\$ 1,497,125	\$ 203,000	\$ 1,497,1
1.2	Station stone within substation fence.	3,175	CY	\$	27	\$ 85,725	\$ 75	\$ 238,125	\$ 102	\$ 323,8
1.3	Substation Fence	2,130	LF	\$	100	\$ 213,000	\$ 100	\$ 213,000	\$ 200	\$ 426,0
1.4	Retaining Wall (1065' x 13')	1	LS	\$	406,755	\$ 406,755	\$ 925,345	\$ 925,345	\$ 1,332,100	\$ 1,332,1
1.5	Compacted Fill (124,583cy Sand)	124,583	CY	\$	17	\$ 2,117,911	\$ 20	\$ 2,491,660	\$ 37	\$ 4,609,5
1.6	Permanent Access Road - 20'-Wide (From Gordon RD)	2,100	LF	\$	35	\$ 73,500	\$ 285	\$ 598,500	\$ 320	\$ 672,0
1.7	Natural Gas Transmission Line Relocation	1	LS	\$	-		\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,0
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	PREP/ GRADING/ FENCING / CIVIL					\$ 2,896,891		\$ 7,763,755		\$ 10,660,6
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	8	EA	\$	14,940	\$ 119,520	\$ 16,000	\$ 128,000	\$ 30,940	\$ 247,5
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	32	EA	\$	26,145	\$ 836,640	\$ 28,000	\$ 896,000	\$ 54,145	\$ 1,732,6
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	102	EA	\$	4,482	\$ 457,164	\$ 4,800	\$ 489,600	\$ 9,282	\$ 946,7
2.1f	Station Service Transformer Stand Foundation	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,2
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	42	EA	\$	4,482	\$ 188,244	\$ 4,800	\$ 201,600	\$ 9,282	\$ 389,8
2.1j	Instrument Transformer Stand Foundations	33	EA	\$	4,482	\$ 147,906	\$ 4,800	\$ 158,400	\$ 9,282	\$ 306,3
2.1k	Arrester Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,6
2.1m	Wave Trap Stand Foundations	2	EA	\$	4,482	\$ 8,964	\$ 4,800	\$ 9,600	\$ 9,282	\$ 18,5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	te	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$	÷ -	\$ -	\$ -	\$ -	\$ -
2.1p										
2.2	230kV									
2.2a	Circuit Breaker Foundations	1	EA	\$ 11,95	52 \$	11,952	\$ 12,800	\$ 12,800	\$ 24,752	\$ 24,752
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,82	20 \$	-	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 22,41	10 \$	89,640	\$ 24,000	\$ 96,000	\$ 46,410	\$ 185,640
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,41	10 \$	-	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	8	EA	\$ 3,73	35 \$	29,880	\$ 4,000	\$ 32,000	\$ 7,735	\$ 61,880
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,73	35 \$	-	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,73	35 \$	-	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	9	EA	\$ 3,73	35 \$	33,615	\$ 4,000	\$ 36,000	\$ 7,735	\$ 69,615
2.2k	Arrester Stand Foundations	3	EA	\$ 3,73	35 \$	\$ 11,205	\$ 4,000	\$ 12,000	\$ 7,735	\$ 23,205
2.2m	Wave Trap Stand Foundations	1	EA	\$ 3,73	35 \$	3,735	\$ 4,000	\$ 4,000	\$ 7,735	\$ 7,735
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$	÷ -	\$ -	\$ -	\$ -	\$ -
2.2p					\top					
2.3	115kV									
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,22	29 \$	÷ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,61	15 \$	÷ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 16,43	34 \$	65,736	\$ 17,600	\$ 70,400	\$ 34,034	\$ 136,136
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,43	34 \$	-	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	4	EA	\$ 2,98	38 \$	11,952	\$ 3,200	\$ 12,800	\$ 6,188	\$ 24,752
2.3f	Fuse Stand Foundations	0	EA	\$ 2,98	38 \$	-	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,98	38 \$	-	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,98	_	-	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3j	Instrument Transformer Stand Foundations	6	EA	\$ 2,98	38 \$	17,928		\$ 19,200	\$ 6,188	\$ 37,128
2.3k	Arrester Stand Foundations	6	EA	\$ 2,98	38 \$	17,928		\$ 19,200	\$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,98	38 \$	÷ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
					Ť					
2.4	Transformer Foundations									
2.4a	345-230kV Transformer Foundation w/ Oil Containment	1	EA	\$ 97,11	10 \$	97,110	\$ 104,000	\$ 104,000	\$ 201,110	\$ 201,110
2.4b	345-115kV Transformer Foundation w/ Oil Containment	2	EA	\$ 74,70	_		\$ 80,000	\$ 160,000	\$ 154,700	\$ 309,400
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	.		\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
					T					
2.5	Control House Foundations / Pad									
2.5a	Control House / Pad	1	EA	\$ 97,11	10 \$	\$ 97,110	\$ 104,000	\$ 104,000	\$ 201,110	\$ 201,110
2.5b	Generator Foundation	1	EA	\$ 16,00	00 \$	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
					\top					
2.6	Lightning Mast Foundations									
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,22	29 \$; -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b				\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
					\top					
TOTAL - SUBST	TATION FOUNDATIONS				\$	2,443,003		\$ 2,616,200		\$ 5,059,203
	N STRUCTURES									
3.1	345kV									

3.1b Su 3.1c Sw			Unit of Measure	Material Su	upply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	1	TOTAL
3.1c Sv	Substation A-Frame Structures - Stand alone	8	EA	\$	37,000	\$ 296,000	\$ 37,000	\$ 296,000	\$ 74,000	\$	592,000
	Substation A-Frame Structures - Shared Column	0	EA	\$	37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$	-
3.1d St	Switch Stands	17	EA	\$	14,800	\$ 251,600	\$ 14,800	\$ 251,600	\$ 29,600	\$	503,200
	Station Service Transformer Stand	1	EA	\$	14,800	\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$	29,600
3.1e Bu	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
3.1f Bu	Bus Support 1 Ph	42	EA	\$	3,700	\$ 155,400	\$ 3,700	\$ 155,400	\$ 7,400	\$	310,800
3.1g In:	nstrument Transformer Stand	33	EA	\$	1,850	\$ 61,050	\$ 1,850	\$ 61,050	\$ 3,700	\$	122,100
3.1h Ar	Arrester Stand	6	EA	\$	1,850	\$ 11,100	\$ 1,850	\$ 11,100	\$ 3,700	\$	22,200
3.1j W	Nave Trap Stand	2	EA	\$	7,400	\$ 14,800	\$ 7,400	\$ 14,800	\$ 14,800	\$	29,600
3.1k M	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.2 23	230kV										
3.2a Su	Substation A-Frame Structures - Stand alone	1	EA	\$	33,300	\$ 33,300	\$ 33,300	\$ 33,300	\$ 66,600	\$	66,600
	Substation A-Frame Structures - Shared Column	0	EA	\$	33,300	\$ -		\$ -	\$ 66,600	\$	-
	switch Stands	2	EA	\$		\$ 24,050		\$ 24,050	\$ 24,050	\$	48,100
	Station Service Transformer Stand	0	EA	\$	12,025	\$ -		\$ -	\$ 24,050	\$	-
	Bus Support 3ph	0	EA	Ś	-	\$ -	\$ -	\$ -	\$ -	Ś	-
	Bus Support 1 Ph	0	EA	Ś	2,775	\$ -		\$ -	\$ 5,550	\$	_
	nstrument Transformer Stand	9	EA	\$		\$ 11,655		\$ 11,655	\$ 2,590	\$	23,310
	Arrester Stand	3	EA	\$				\$ 3,885	\$ 2,590	-	7,770
	Wave Trap Stand	1	EA	Ś	5,550	\$ 5,550	\$ 5,550	\$ 5,550	\$ 11,100	s	11,100
	Misc. Structures	0	EA	Ś	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	Ġ	-
3.2K IVI	wisc. Structures	0	LA	7	0,473	· -	5 0,475	-	\$ 12,550	,	
3.3 11	115kV										
	Substation A-Frame Structures - Stand alone	2	EA	Ś	18,500	\$ 37,000	\$ 18,500	\$ 37,000	\$ 37,000	¢	74,000
	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500	\$ -		\$ -	\$ 37,000	Ś	-
	Switch Stands	2	EA	Ś	7,955	\$ 15,910		\$ 15,910	\$ 15,910	Ś	31,820
	Fuse Stand	0	EA	\$		\$ -	\$ 7,955		\$ 15,910	7	- 31,820
		0	EA	\$	3,330	\$ - \$ -			\$ 6,660	\$	-
	Bus Support 3ph Bus Support 1 Ph	0	EA	Ś		\$ - \$ -		\$ - \$ -	\$ 3,700		-
	**	6		\$		T	, ,,,,,		,	-	
	nstrument Transformer Stand		EA	<u> </u>	,	,,	\$ 740	, , ,	, , , , , ,	\$	8,880
	Arrester Stand	6	EA	\$	740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$	8,880
	Wave Trap Stand	0	EA	\$	-,	\$ -		\$ -	\$ 7,400	\$	-
3.3k M	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	Ş	-
	TION STRUCTURES					\$ 944,980		\$ 944,980		\$	1,889,960
I. MAJOR EQUIPT											
	145kV										
	Circuit Breakers	8	EA	\$,	\$ 1,600,000		\$ 640,000	\$ 280,000	-	2,240,000
	Capacitor Banks	0	EA	\$		\$ -		\$ -	\$ 80,000		-
	345 kV - 230 kV Auto Transformer	1	EA		3,400,000	\$ 3,400,000	\$ 750,000	\$ 750,000	\$ 4,150,000	\$	4,150,000
	145 kV - 115 kV Auto Transformer	2	EA	\$	3,400,000	\$ 6,800,000	\$ 750,000	\$ 1,500,000	\$ 4,150,000	\$	8,300,000
	230kV										
	Circuit Breakers	1	EA	\$	115,000				\$ 195,000		195,000
4.2b Ca	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.3 11	15kV										
4.3a Cii	Circuit Breakers	0	EA	\$		\$ -	\$ 60,000		\$ 112,000		-
4.3b Ca	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$	-
TOTAL - MAJOR E	EQUIPTMENT					\$ 11,915,000		\$ 2,970,000		\$	14,885,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5. SMALL EQU	IPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	2	EA	\$ 40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$ 110,000
5.1b	Disconnect Switches - 3ph w/ manual operator	17	EA	\$ 35,000	\$ 595,000	\$ 17,500	\$ 297,500	\$ 52,500	\$ 892,500
5.1c	VT'S	6	EA	\$ 25,000	\$ 150,000	\$ 12,000	\$ 72,000	\$ 37,000	\$ 222,000
5.1d	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.1e	CCVT'S	21	EA	\$ 13,000	\$ 273,000	\$ 8,000	\$ 168,000	\$ 21,000	\$ 441,000
5.1f	Arresters	15	EA	\$ 6,500	\$ 97,500	\$ 1,500	\$ 22,500	\$ 8,000	\$ 120,000
5.1g	Wave Traps	2	EA	\$ 13,000	\$ 26,000	\$ 8,000	\$ 16,000	\$ 21,000	\$ 42,000
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$ 250,000
5.1j		0	EA	\$ 15,000	\$ -	\$ 7,500	\$ -	\$ 22,500	\$ -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	1	EA	\$ 35,000	\$ 35,000	\$ 15,000	\$ 15,000	\$ 50,000	\$ 50,000
5.2b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 30,000	\$ 30,000	\$ 17,500	\$ 17,500	\$ 47,500	\$ 47,500
5.2c	VT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.2d	CT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.2e	CCVT'S	3	EA	\$ 10,000	\$ 30,000	\$ 6,000	\$ 18,000	\$ 16,000	\$ 48,000
5.2f	Arresters	6	EA	\$ 5,000	\$ 30,000	\$ 6,000	\$ 36,000	\$ 11,000	\$ 66,000
5.2g	Wave Traps	1	EA	\$ 13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	2	EA	\$ 33,000	\$ 66,000	\$ 15,000	\$ 30,000	\$ 48,000	\$ 96,000
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
5.3c	VT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.3d	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.3e	CCVT'S	2	EA	\$ 8,000	\$ 16,000	\$ 8,000	\$ 16,000	\$ 16,000	\$ 32,000
5.3f	Arresters	12	EA	\$ 3,420	\$ 41,040	\$ 6,000	\$ 72,000	\$ 9,420	\$ 113,040
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								-	
TOTAL - SMAL	 L EQUIPTMENT / MATERIALS				\$ 1,994,540		\$ 1,060,500		\$ 3,055,040
	OUSE / PANELS / GENERATOR				3 1,554,540		3 1,000,300		3,033,040
o. CONTROL									
6.1	CONTROL HOUSE	1	EA	\$ 975,000	\$ 975,000	\$ 170,000	\$ 170,000	\$ 1,145,000	\$ 1,145,000
6.2	Protection and Telecom Equipment Panels	29	EA	\$ 35,000	\$ 1,015,000	\$ 10,000	\$ 290,000	\$ 45,000	\$ 1,305,000
6.3	125VDC Batteries	2		\$ 75,000				\$ 100,000	
6.4	Control Cables	1	LS	\$ 472,500	<u> </u>			\$ 945,000	
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000				\$ 150,000	
6.7	DC Distribution System	2		\$ 50,000		· ·		\$ 150,000	
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
TOTAL - CONTE	ROL HOUSE / PANELS / GENERATOR				\$ 2,927,500		\$ 1,477,500		\$	4,405,000
7. MISC ITEMS										
7.1	Conduit & Cable Trench System	1,950	LF	\$ 185.00	\$ 360,750	\$ 170.00	\$ 331,500	\$ 355	\$	692,250
7.2	Rigid Bus, Fittings & Insulators	2,500	LF	\$ 125.07	\$ 312,675	\$ 237.10	\$ 592,750	\$ 362	\$	905,425
7.3	Strain Bus, Connectors & Insulators	2,000	LF	\$ 39.30	\$ 78,600	\$ 53.35	\$ 106,700	\$ 93	\$	185,300
7.4	Grounding System	25,000	LF	\$ 6.93	\$ 173,250	\$ 32.58	\$ 814,500	\$ 40	\$	987,750
7.5	Strain Bus Insulators - 345kV	48	EA	\$ 2,000	\$ 96,000	\$ 1,050	\$ 50,400	\$ 3,050	\$	146,400
7.6	Strain Bus Insulators - 230kV	6	EA	\$ 1,400	\$ 8,400	\$ 750	\$ 4,500	\$ 2,150	\$	12,900
7.7	Strain Bus Insulators - 115kV	12	EA	\$ 1,000	\$ 12,000	\$ 550	\$ 6,600	\$ 1,550	\$	18,600
7.8	Low Voltage AC Station Service	1	LS	\$ 50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
	SSVT Service	1	LS	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12										
7.13										
7.14										
7.15										
7.16										
7.17										
7.18										
7.19										
7.20										
TOTAL - MISC	TEMS				\$ 1,441,675		\$ 2,331,950		\$	3,773,625
	dam Substation - Install				\$ 24,563,589		\$ 19,164,885		Ś	43,728,474
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				Ų 21,505,505		ψ 13)10 1,003		Ť	10,720,171
-	Contractor Mobilization / Demobilization									
	Mob / Demob	1	LS	\$ -	\$ -	\$ 437,285	\$ 437,285	\$ 437,285	Ś	437,285
	Project Management, Material Handling & Amenities			·		,	, , , , ,	,		,
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 1,662,010	\$ 1,662,010	\$ 1,662,010	\$	1,662,010
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 437,285	\$ 437,285	\$ 437,285	\$	437,285
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 437,285	\$ 437,285	\$ 437,285	\$	437,285
	Engineering									
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 3,498,278	\$ 3,498,278	\$ 3,498,278	\$	3,498,278
8.6	Lidar	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.7	Geotech	4	EA	\$ -	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
8.8	Surveying/Staking	1	Site	\$ -	\$ -	\$ 306,099	\$ 306,099	\$ 306,099	\$	306,099
	Testing & Commissioning									
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 1,093,212	\$ 1,093,212	\$ 1,093,212	\$	1,093,212
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 131,185	\$ 131,185	\$ 131,185	\$	131,185

Item	ltem Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Mat	terial Supply Cost	Labor & Equipment Supply Rate	La	abor & Equipment Cost	Total Unit Rate	TOTAL
8.13	Real Estate Costs (New)	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$	-	\$ 247,500	\$	247,500	\$ 247,500	\$ 247,500
8.15	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)		LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.17		-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	1,965,087	\$	1,965,087	\$ -	\$	-	\$ 1,965,087	\$ 1,965,087
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 43,728	\$	43,728	\$ 43,728	\$ 43,728
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	1,965,087		\$	8,307,867		\$ 10,272,954

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D. SS Rotterdam-Install

E. Rotterdam Substation - Removal

Estimate Revision: Total: \$ 4,159,934

NAT & NYPA - T027 - (Segmen	it A, Double Circuit)			
	Supply	,	Installation	Total
E. Rotterdam Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ 1,472,750	\$ 1,472,750
2. SUBSTATION FOUNDATIONS	\$	-	\$ 617,400	\$ 617,400
3. SUBSTATION STRUCTURES	\$	-	\$ 534,900	\$ 534,900
4. MAJOR EQUIPTMENT	\$	-	\$ 147,000	\$ 147,000
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 169,500	\$ 169,500
6. CONTROL HOUSE / PANELS	\$	-	\$ 150,000	\$ 150,000
7. MISC ITEMS	\$	-	\$ 519,480	\$ 519,480
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 548,904	\$ 548,904
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	-	\$ 4,159,934	\$ 4,159,934
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$		\$ 4,159,934	\$ 4,159,934

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
E. Rotte	rdam Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	6.3	ACRES	\$ -	\$ -	\$ 203,000	\$ 1,268,750	\$ 203,000	\$ 1,268,750
1.2	Station stone within substation fence.	2,000	CY	\$ -	\$ -	\$ 102	\$ 204,000	\$ 102	\$ 204,000
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ 1,472,750		\$ 1,472,750
	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	-	TOTAL
2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.2	230kV									
2.2a	Circuit Breaker Foundations	9	EA	\$ -	\$ -	\$ 7,200	\$ 64,800	\$ 7,200	\$	64,800
2.2b	Capacitor Bank Foundations	2	EA	\$ -	\$ -	\$ 32,000	\$ 64,000	\$ 32,000	\$	64,000
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	1	EA	\$ -	\$ -	\$ 22,000	\$ 22,000	\$ 22,000	\$	22,000
2.2d	Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	\$	55,000
2.2e	Switch Stand Foundations	15	EA	\$ -	\$ -	\$ 5,200	\$ 78,000	\$ 5,200	\$	78,000
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.2g	Bus Support 3ph Foundations	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.2h	Bus Support 1 Ph Foundations	59	EA	\$ -	\$ -	\$ 2,400	\$ 141,600	\$ 2,400	\$	141,600
2.2j	Instrument Transformer Stand Foundations	15	EA	\$ -	\$ -	\$ 2,400	\$ 36,000	\$ 2,400	\$	36,000
2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ -	\$ 2,400	\$ 14,400	\$ 2,400	\$	14,400
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.3	115kV									
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.3e	Switch Stand Foundations	3	EA	\$ -	\$ -	\$ 5,200	\$ 15,600	\$ 5,200	Ś	15,600
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	_
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	_
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	Ś	
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	Ś	
2.3n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
2.5ρ	IMISC. Structure i ouridations	0	LA	-	,	,	,	· -	,	
2.4	Transfermer Ferradations									
2.4 2.4a	Transformer Foundations 345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
2.4a 2.4b		0	EA	\$ - \$ -	\$ -	\$ -	\$ -		\$	
2.40 2.4c	345-115kV Transformer Foundation w/ Oil Containment		EA	1	\$ -		·	•	\$	
	230kV-115kV Transformer Foundation w/ Oil Containment	3	EA			1	\$ 126,000 \$ -		\$	126,000
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	>	
2.5	Control House Foundations / Dad									
2.5a	Control House Foundations / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	Ś	
	Control House / Pad	0		•	· .		1	•		
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
	Unkaring Mark Farm dations									
2.6	Lightning Mast Foundations	-	F.	4		c.		<u>^</u>		
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.6b		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
2.6c		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$	•
	TATION FOUNDATIONS				\$ -		\$ 617,400		\$	617,400
	N STRUCTURES									
3.1	345kV									
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-

	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	1	EA	\$ -	\$ -	\$ 27,000	\$ 27,000	\$ 27,000	\$ 27,00
	Substation A-Frame Structures - Shared Column	5	EA	\$ -	\$ -		\$ 135,000	\$ 27,000	
	Switch Stands	15	EA	\$ -	\$ -		\$ 146,250	\$ 9,750	\$ 146,25
	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	4	EA	\$ -	\$ -	\$ 2,250	\$ 9,000	\$ 2,250	\$ 9,00
	Bus Support 1 Ph	59	EA	\$ -	\$ -	-	\$ 132,750	\$ 2,250	\$ 132,75
	Instrument Transformer Stand	15	EA	\$ -	\$ -	,	\$ 15,750	\$ 1,050	
	Arrester Stand	6	EA	\$ -	\$ -	\$ 1,050	\$ 6,300	\$ 1,050	\$ 6,30
	Wave Trap Stand	3	EA	\$ -	\$ -	\$ 4,500	\$ 13,500	\$ 4,500	\$ 13,50
	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-		-							
3.3	115kV								
	Substation A-Frame Structures - Stand alone	2	EA	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ 30,00
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stands	3	EA	\$ -	\$ -	\$ 6,450	\$ 19,350	\$ 6,450	\$ 19,35
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
OTAL - SUBST	ATION STRUCTURES				\$ -		\$ 534,900		\$ 534,90
. MAJOR EQU	IPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	9	EA	\$ -	\$ -	\$ 7,000	\$ 63,000	\$ 7,000	\$ 63,00
4.2b	Capacitor Banks	2	EA	\$ -	\$ -	\$ 42,000	\$ 84,000	\$ 42,000	\$ 84,00
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
OTAL - MAJOI	R EQUIPTMENT				\$ -		\$ 147,000		\$ 147,00
S. SMALL EQUI	PTMENT / MATERIALS								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
	Disconnect Switches - 3ph w/ manual operator	12	EA	\$ -	\$ -	\$ 5,500	\$ 66,000	\$ 5,500	\$ 66,000
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CCVT'S	8	EA	\$ -	\$ -	\$ 1,500	\$ 12,000	\$ 1,500	\$ 12,000
	Arresters	15	EA	\$ -	\$ -	\$ 2,500	\$ 37,500	\$ 2,500	
	Wave Traps	3	EA	\$ -	\$ -	\$ 2,500	\$ 7,500	\$ 2,500	\$ 7,500
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j	Station Service Hansionners	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2		0	LA	7	7	7	7	7	*
5.3	115kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
	VT'S	0	EA	\$ -	\$ -	\$ 3,300	\$ -	\$ 3,300	\$ -
	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				·	T	\$ -	\$ - \$ -	\$ - \$ -	
	CCVT'S	0	EA EA	\$ -	\$ - \$ -	\$ 1,500	·	\$ 1,500	\$ - \$ 13,500
	Arresters				T	, , , , , , , , , , , , , , , , , , , ,	,		
	Wave Traps	0	EA	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -
	Station Service Transformers	0	EA		\$ -		·	·	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	EQUIPTMENT / MATERIALS				\$ -		\$ 169,500		\$ 169,500
	DUSE / PANELS / GENERATOR								
	CONTROL HOUSE	1	EA	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
6.2	PANELS	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Protection and Telecom Equipment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - CONTI	OL HOUSE / PANELS / GENERATOR				\$ -		\$ 150,000		\$ 150,000
7. MISC ITEMS									
7.1	Conduit & Cable Trench System	1	LS	\$ -	\$ -	\$ 42,000.00	\$ 42,000	\$ 42,000	\$ 42,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
7.2	Rigid Bus, Fittings & Insulators	3,200	LF	\$ -	\$ -	\$ 126.25	\$ 404,000	\$ 126	\$ 404,000
7.3	Strain Bus, Connectors & Insulators	800	LF	\$ -	\$ -	\$ 39.35	\$ 31,480	\$ 39	\$ 31,480
7.4	Grounding System	1	LS	\$ -	\$ -	\$ 42,000.00	\$ 42,000	\$ 42,000	\$ 42,000
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 519,480		\$ 519,480
E. Rotter	dam Substation - Removal				\$ -		\$ 3,611,030		\$ 3,611,030
8. MOB/DEMC	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 36,110	\$ 36,110	\$ 36,110	\$ 36,110
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 137,246	\$ 137,246	\$ 137,246	\$ 137,246
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 36,110	\$ 36,110	\$ 36,110	\$ 36,110
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 36,110	\$ 36,110	\$ 36,110	\$ 36,110
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 288,882	\$ 288,882	\$ 288,882	\$ 288,882
8.6	LiDAR	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	EA	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500	\$ -
8.8	Surveying/Staking		Site	\$ -	\$ -	\$ 25,277	\$ -	\$ 25,277	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 90,276	\$ -	\$ 90,276	\$ -
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 10,833	\$ 10,833	\$ 10,833	\$ 10,833
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17			LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18 8.19	Sales Tax on Materials	1	LS LS	\$ -	\$ - \$ -	\$ - \$ 3,611	\$ - \$ 3,611	\$ - \$ 3,611	\$ 3,611
	Fees for permits, including roadway, railroad, building or other local permits	1	LS		· .	\$ 3,611		<i>φ</i> 3,611	548,904
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 548,904		\$ 1

NAT & NYPA - T026 - (Segment A, Base) F. Edic Substation - Install

Estimate Revision:

5

NAT & NYPA - T026 - (Segment A, Base)

Supply Installation

F. Edic Substation - Install

NAT & NYPA - 1026 - (Segment A, Base)										
		Supply	Installation		Total					
F. Edic Substation - Install										
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	99,300	\$ 396,250	\$	495,550					
2. SUBSTATION FOUNDATIONS	\$	425,790	\$ 456,000	\$	881,790					
3. SUBSTATION STRUCTURES	\$	299,700	\$ 299,700	\$	599,400					
4. MAJOR EQUIPTMENT	\$	600,000	\$ 240,000	\$	840,000					
5. SMALL EQUIPTMENT / MATERIALS	\$	645,500	\$ 315,000	\$	960,500					
6. CONTROL HOUSE / PANELS	\$	313,850	\$ 138,850	\$	452,700					
7. MISC ITEMS	\$	292,289	\$ 689,000	\$	981,289					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	214,114	\$ 992,905	\$	1,207,020					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-					
SUBTOTAL:	\$	2,890,543	\$ 3,527,705	\$	6,418,249					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-					
TOTAL:	\$	2,890,543	\$ 3,527,705	\$	6,418,249					

Descr	iption of	rvvori	κ:

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate Material Supply Cost		Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	
F. Edic S	ubstation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	1.25	ACRES	\$	-	\$ -	\$ 203,000	\$ 253,750	\$ 203,000	\$ 253,750
1.2	Station stone within substation fence.	900	CY	\$	27					
1.3	Substation Fence	750	LF	\$	100	\$ 75,000	\$ 100	\$ 75,000	\$ 200	\$ 150,000
1.4										
1.5										
1.6 1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
	REP/ GRADING/ FENCING / CIVIL					\$ 99,300		\$ 396,250		\$ 495,550
	FOUNDATIONS									
	345kV	2			44.040	4 44 000	45.000	40.000	4 20.40	4 00 00
2.1a 2.1b	Circuit Breaker Foundations	3	EA EA	\$	14,940 56,025		\$ 16,000 \$ 60,000		\$ 30,940 \$ 116,025	
2.1c	Capacitor Bank Foundations Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145		\$ 28,000		\$ 116,025	
	Caisson DE Foundations (for DE A frame str stand alone) Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145		\$ 28,000	\$ -	\$ 54,145	
2.1e	Switch Stand Foundations	42	EA	Ś	4,482		\$ 4,800	т	\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482		\$ 4,800	\$ -	\$ 9,282	
	Bus Support 3ph Foundations	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	17	EA	\$	4,482	\$ 76,194	\$ 4,800	\$ 81,600	\$ 9,282	\$ 157,794
2.1j	Instrument Transformer Stand Foundations	18	EA	\$	4,482	\$ 80,676	\$ 4,800	\$ 86,400	\$ 9,282	\$ 167,076
2.1k	Arrester Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	
2.1m	Wave Trap Stand Foundations	2	EA	\$	4,482		\$ 4,800	\$ 9,600	\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										_
				\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
				\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
				-						
				-						
				_						
TOTAL - SUBST	ATION FOUNDATIONS					\$ 425,790		\$ 456,000		\$ 881,790
, 1350										Page 22 of 62

Item	Item Description	Estimated Quantity	Unit of Measure	Material S	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3. SUBSTATION	N STRUCTURES									
3.1	345kV									
3.1a	Substation A-Frame Structures - Stand alone	2	EA	\$	37,000	\$ 74,000	\$ 37,000	\$ 74,000	\$ 74,000	\$ 148,000
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$	37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1c	Switch Stands	7	EA	\$	14,800	\$ 103,600	\$ 14,800	\$ 103,600	\$ 29,600	\$ 207,200
3.1d	Station Service Transformer Stand	0	EA	\$	14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$ -
3.1e	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	17	EA	\$	3,700	\$ 62,900	\$ 3,700	\$ 62,900	\$ 7,400	\$ 125,800
3.1g	Instrument Transformer Stand	18	EA	\$	1,850		\$ 1,850	\$ 33,300	\$ 3,700	\$ 66,600
3.1h	Arrester Stand	6		\$	1,850		\$ 1,850	\$ 11,100	\$ 3,700	\$ 22,200
3.1j	Wave Trap Stand	2	EA	\$	7,400		\$ 7,400	\$ 14,800	\$ 14,800	\$ 29,600
3.1k	Misc. Structures	0		\$	6,475		\$ 6,475	\$ -	\$ 12,950	\$ -
3.1K	Wilder Structures	•	LA	1	0,473	7	9 0,475	7	7 12,550	Ť
TOTAL - SUBST	ATION STRUCTURES					\$ 299,700		\$ 299,700		\$ 599,400
4. MAJOR EQU						255,700		233,700		9 333,400
4. MAJOR EQU 4.1	345kV									
		3	Γ^	ċ	200.000	¢ 600,000	¢ 90,000	ć 340.000	¢ 200,000	¢ 940,000
4.1a	Circuit Breakers	3		\$	200,000		\$ 80,000 \$ 80,000	\$ 240,000 \$ -	\$ 280,000	\$ 840,000 \$ -
4.1b	Capacitor Banks	0		\$			7 00,000	· .	\$ 80,000	Ÿ
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$			\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV									
4.2a	Circuit Breakers	0	EA	\$	115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV									
4.3a	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAJO	R EQUIPTMENT					\$ 600,000		\$ 240,000		\$ 840,000
5. SMALL EQUI	PTMENT / MATERIALS									
5.1	345kV									
5.1a	Line Switches - 3ph w/ motor operator	2	EA	\$	40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$ 110,000
5.1b	Disconnect Switches - 3ph w/ manual operator	5	EA	\$	35,000	\$ 175,000	\$ 17,500	\$ 87,500	\$ 52,500	\$ 262,500
5.1c	VT'S	6	EA	\$	25,000	\$ 150,000	\$ 12,000	\$ 72,000	\$ 37,000	\$ 222,000
5.1d	CT'S	6	EA	\$	13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.1e	CCVT'S	6	EA	\$	13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.1f	Arresters	9		\$	6,500		\$ 1,500	\$ 13,500	\$ 8,000	\$ 72,000
5.1g	Wave Traps	2	EA	\$	13,000	\$ 26,000	\$ 8,000	\$ 16,000	\$ 21,000	\$ 42,000
5.1h	Station Service Transformers	0		\$	200,000		\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j				+*		*	7 00,000	7	7 200,000	•
3.1										
				+						
				+						
TOTAL SMALL	L EQUIPTMENT / MATERIALS					\$ 645,500		\$ 315,000		\$ 960,500
	OUSE / PANELS / GENERATOR					و 045,500		313,000		900,500
		2	E4	ć	554.350	<u>^</u>	ć 05.000	ć	ć cac and	^
6.1	CONTROL HOUSE	0		\$	551,250		\$ 85,000		\$ 636,250	
6.2	Protection and Telecom Equipment Panels	7		\$	35,000			\$ 70,000	\$ 45,000	
6.3	125VDC Batteries	0		\$		т	,	\$ -	\$ 100,000	\$ -
6.4	Control Cables	1	LS	\$,		\$ 68,850		\$ 137,700	. , , ,
6.5	SCADA and Communications	0	EA	\$		т	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$	50,000			\$ -	\$ 150,000	\$ -
6.7	DC Distribution System	0	EA	\$	50,000		\$ 100,000	\$ -	\$ 150,000	\$ -
6.8	Security	0		\$	7,500		\$ 7,500		\$ 15,000	
6.9	Fire Alarm	0		\$	7,500		\$ 7,500		\$ 15,000	
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
TOTAL - CONTI	ROL HOUSE / PANELS / GENERATOR					\$ 313,850		\$ 138,850		\$ 452,700
7. MISC ITEMS										
7.1	Conduit & Cable Trench System	1	L.S.	\$	44,400.00	\$ 44,400	\$ 81,600.00	\$ 81,600	\$ 126,000	\$ 126,000
7.2	Rigid Bus, Fittings & Insulators	1		\$	75,042.00		\$ 142,260.00			
7.3	Strain Bus, Connectors & Insulators	1		\$	58,950.00					
7.4	Grounding System	1		\$	31,185.00					
	1			1.7	,_55.00	. 51,105		. 213,313	. 251,100	D 24 C(2

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e N	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
7.5	Strain Bus Insulators - 345kV	24	EA	\$ 2,000	0 \$	48,000	\$ 1,050	\$ 25,200	\$ 3,050	\$	73,200
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	0 \$	-	\$ 750	\$ -	\$ 2,150	\$	-
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	0 \$	-	\$ 550	\$ -	\$ 1,550	\$	-
7.8	Low Voltage AC Station Service	0	LS	\$ 50,000	0 \$	-	\$ 75,000	\$ -	\$ 125,000	\$	-
7.9	SSVT Service	0	LS	\$ 45,000	0 \$	-	\$ 45,000	\$ -	\$ 90,000	\$	-
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 14,000	0 \$	14,000	\$ 70,000	\$ 70,000	\$ 84,000	\$	84,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 20,713	2 \$	20,712	\$ 70,000	\$ 70,000	\$ 90,712	\$	90,712
7.12											
7.13					\top						
7.14					_						
7.15					_						-
7.16					\top						
7.17					_						
7.18					+						
7.19					+						
7.20					+						
7.20					+						
7.21					+						
					+						
7.23					_						
7.24					_						
7.25					٠.						
TOTAL - MISC					\$	292,289		\$ 689,000		\$	981,289
F. Edic S	ubstation - Install				\$	2,676,429		\$ 2,534,800		\$	5,211,229
	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
8. IVIOD/ DEIVIO	Contractor Mobilization / Demobilization				_						
8.1	Mob / Demob	1	LS	\$ -	Ś	-	\$ 52,112	\$ 52,112	\$ 52,112	ė	52,112
0.1	Project Management, Material Handling & Amenities	-	LJ	, -	13	-	\$ 32,112	3 32,112	3 32,112	7	32,112
	Project Management, Material Handling & Amenities				+						
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 198,066	\$ 198,066	\$ 198,066	\$	198,066
8.3	Utility PM and Project Oversite	1	LS		Ś	-	\$ 52,112	\$ 52,112	\$ 52,112	Ś	52,112
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	Ś	-	\$ 52,112	\$ 52,112	\$ 52,112	Ś	52,112
	Engineering			·	Ť						
8.5	Design Engineering	1	LS	\$ -	5	-	\$ 416,898	\$ 416,898	\$ 416,898	s	416,898
8.6	LiDAR		LS	\$ -	Ś		\$ -	\$ -	\$ -	Ś	-
8.7	Geotech	4	EA	\$ -			•	\$ 14,000	\$ 3,500		14,000
8.8	Surveying/Staking	1	Site	\$ -	_ ·		\$ 36,479	\$ 36,479	\$ 36,479		36,479
0.0	Testing & Commissioning		Site	-	۲,		30,473	30,473	30,473	,	30,473
8.9	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	5	-	\$ 130,281	\$ 130,281	\$ 130,281	,	130,281
0.9	Permitting and Additional Costs		LJ	, -	13	-	3 130,261	3 130,261	3 130,261	7	130,281
0.10			1.6		٠,		*	ć	<u> </u>		
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	-		\$ -	\$ -	\$ - \$ -	\$	-
8.11	Environmental Mitigation		LS	7	- + -		7	7	т	\$	
8.12	Warranties / LOC's	1	LS	\$ -	<u> </u>		\$ 15,634	\$ 15,634	\$ 15,634		15,634
8.13	Real Estate Costs (New)	-	LS	\$ -	<u> </u>		\$ -	\$ -	\$ -	\$	
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	- 7		\$ 20,000	\$ 20,000	\$ 20,000	\$	20,000
8.15	Legal Fees	-	LS	\$ -	_ ·		\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$ -	\$		\$ -	\$ -	\$ -	\$	-
	Sales Tax on Materials	1	LS	\$ 214,114	4 \$	214,114	\$ -	\$ -	\$ 214,114	\$	214,114
8.18											
8.18 8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 5,211	\$ 5,211	\$ 5,211	\$	5,211

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NAT & NYPA - T026 - (Segment A, Base) G. Edic Substation - Removal

Total: \$ 140,423

NAT & NYPA - T026 - (Segment A, Base)										
		Supply		Installation	Total					
G. Edic Substation - Removal										
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	86,250	\$	86,250				
2. SUBSTATION FOUNDATIONS	\$	-	\$	14,000	\$	14,000				
3. SUBSTATION STRUCTURES	\$	-	\$	6,750	\$	6,750				
4. MAJOR EQUIPTMENT	\$	-	\$	-	\$	-				
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	4,500	\$	4,500				
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-				
7. MISC ITEMS	\$	-	\$	-	\$	10,500				
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$	18,423	\$	18,423				
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-				
SUBTOTAL:	\$	-	\$	129,923	\$	140,423				
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-				
TOTAL:	Ś		Ś	129.923	Ś	140.423				

Description	Description of Work:											
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL			
G. Edic S	Substation - Removal											
1. SITE PREP/	GRADING/ FENCING / CIVIL											
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -			
1.2	Station stone within substation fence.			\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -			
1.3	Substation Fence	575	LF	\$ -	\$ -	\$ 150	\$ 86,250	\$ 150	\$ 86,250			
1.4												
1.5												
1.6												
1.7												
1.8												
1.9												
1.10												
1.11												
1.12												
1.13												
1.14												
1.15												
	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ 86,250		\$ 86,250			
	N FOUNDATIONS											
2.1	345kV											
2.1a	Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 14,000		\$ 14,000				
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400		\$ 2,400				
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.2	230kV											
2.2a	Circuit Breaker Foundations	0		\$ -	\$ -	\$ 7,200		\$ 7,200				
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000				
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000		\$ 22,000				
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ 11,000		\$ 11,000				
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200		\$ 5,200				
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -			

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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3	115kV	0	ГА	\$ -	\$ -	\$ -	\$ -	\$ -	ć
2.3a 2.3b	Circuit Breaker Foundations	0	EA EA	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.3c	Capacitor Bank Foundations Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.3f	Fuse Stand Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Red								
2.5	Control House Foundations / Pad	0	ГА	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5a 2.5b	Control House / Pad Generator Foundation	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -
2.50	Generator Foundation	0	LA	7	· -	7		· -	, -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ -		\$ 14,000		\$ 14,000
	N STRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d 3.1e	Station Service Transformer Stand	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.1e	Bus Support 3ph Bus Support 1 Ph	3	EA	\$ -	\$ -	\$ 2,250	\$ 6,750	\$ 2,250	
3.1g	Instrument Transformer Stand	0		\$ -	\$ -	\$ 2,230	\$ 0,730	\$ 2,230	\$ 6,730
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	Ś -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	•
3.2c	Switch Stands	0	EA	\$ -	\$ -	\$ 9,750	\$ -	\$ 9,750	
3.2d	Station Service Transformer Stand	0		\$ -	\$ -		\$ -	\$ -	
3.2e	Bus Support 3ph	0		\$ -			\$ -		\$ -
3.2f	Bus Support 1 Ph	0		\$ -	\$ -			\$ 2,250	
3.2g	Instrument Transformer Stand	0		\$ -		\$ 1,050		\$ 1,050	
3.2h	Arrester Stand	0		\$ -	\$ -			\$ 1,050	
3.2j 3.2k	Wave Trap Stand Misc. Structures	0		\$ - \$ -	\$ - \$ -		\$ - \$ -	\$ 4,500 \$ -	
3.2K	INIDO. DE OCEUTES	<u> </u>	ĽA		-	-	- پ	· -	-
3.3	115kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
	1				•	15,500		. 15,500	

3.3c Switc 3.3d Fuse 3.3e Bus S 3.3f Bus S 3.3f Instri 3.3h Arres 3.3j Wave 3.3k Misc. TOTAL - SUBSTATIOI 4.1 345k 4.1a Circu 4.1b Capa 4.1c 4.1d 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu	WENT IkV Luit Breakers Jacitor Banks JikV Luit Breakers Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - 6,450 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 7,000 \$ 42,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - 6,450 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 7,000 \$ 42,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.3d Fuse 3.3e Bus S 3.3f Bus S 3.3f Bus S 3.3g Instru 3.3h Arres 3.3j Wave 3.3k Misc. FOTAL - SUBSTATIOI 3. MAJOR EQUIPTM 4.1 345k 4.1a Circu 4.1b Capa 4.1c 4.1d 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa FOTAL - MAJOR EQU 5. SMALL EQUIPTME	e Stand Support 3ph Support 1 Ph Strument Transformer Stand ester Stand ve Trap Stand ve Trap Stand ve Trap Stand ve Structures ON STRUCTURES WENT SIKV SUIT Breakers Pacitor Banks SIKV SUIT Breakers Pacitor Banks SIKV SUIT Breakers Pacitor Banks SIKV SUIT Breakers Pacitor Banks SIKV SUIT Breakers Pacitor Banks SIKV SUIT Breakers Pacitor Banks SIKV SUIT Breakers Pacitor Banks SIKV SUIT Breakers PACITOR SITE SITE SITE SITE SITE SITE SITE SITE	0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - S - S - S - S - S - S - S - S - S -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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3.3j Wavi 3.3k Misc. FOTAL - SUBSTATIOI 4. MAJOR EQUIPTM 4.1 345k 4.1a Circu 4.1b Capa 4.1c 4.1d 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa FOTAL - MAJOR EQU 5. SMALL EQUIPTME	ve Trap Stand ic. Structures DN STRUCTURES MENT ikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks LikV Luit Breakers Jacitor Banks	0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 6,750 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 6,750 \$ - \$ - \$ -
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4.1 345k 4.1a Circu 4.1b Capa 4.1c 4.1c 4.1c 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa	DIN STRUCTURES MENT IkW Luit Breakers Lacitor Banks LikV Luit Breakers Lacitor Banks LikV Luit Breakers Lacitor Banks LikV Luit Breakers Lacitor Banks LikV Luit Breakers Lacitor Banks LikV Luit Breakers Lacitor Banks Luit Breakers Lacitor Banks Luit Breakers Lacitor Banks Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Breakers Luit Br	0 0 0 0	EA EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ 6,750 \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 42,000	\$ 6,750 \$ - \$ - \$ - \$ -
4.1 345k 4.1a Circu 4.1b Capa 4.1c 4.1d 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa	WENT IkV Luit Breakers Jacitor Banks JikV Luit Breakers Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks	0 0 0 0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ -	\$ - \$ - \$ -	\$ - \$ - \$ - \$ 7,000 \$ 42,000	\$ - \$ - \$ -
4.1 345k 4.1a Circu 4.1b Capa 4.1c 4.1d 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa	WENT IkV Luit Breakers Jacitor Banks JikV Luit Breakers Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks Jacitor Banks	0 0 0 0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ -	\$ - \$ - \$ -	\$ - \$ - \$ - \$ 7,000 \$ 42,000	\$ - \$ - \$ -
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4.1b Capa 4.1c 4.1d 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa TOTAL - MAJOR EQU 5. SMALL EQUIPTME	Accitor Banks AND CONTROL OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF	0 0 0 0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ -	\$ - \$ -	\$ - \$ - \$ - \$ 7,000 \$ 42,000	\$ - \$ -
4.1c 4.1d 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa TOTAL - MAJOR EQU 5. SMALL EQUIPTME	uit Breakers vacitor Banks ikV uit Breakers vacitor Banks iku uit Breakers vacitor Banks uuit Breakers vacitor Banks	0 0 0	EA EA EA	\$ - \$ - \$ -	\$ - \$ - \$ -	\$ -	\$ -	\$ - \$ 7,000 \$ 42,000	\$ -
4.1d 4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa FOTAL - MAJOR EQUE 5. SMALL EQUIPTME	cuit Breakers acitor Banks ikV cuit Breakers acitor Banks QUIPTMENT IENT / MATERIALS	0 0	EA EA	\$ - \$ -	\$ -	\$ 7,000	\$ -	\$ 7,000 \$ 42,000	\$ -
4.2 230k 4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa TOTAL - MAJOR EQU 5. SMALL EQUIPTME	cuit Breakers acitor Banks ikV cuit Breakers acitor Banks QUIPTMENT IENT / MATERIALS	0	EA EA	\$ -	\$ -			\$ 42,000	
4.2a Circu 4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa FOTAL - MAJOR EQU 5. SMALL EQUIPTME	cuit Breakers acitor Banks ikV cuit Breakers acitor Banks QUIPTMENT IENT / MATERIALS	0	EA EA	\$ -	\$ -			\$ 42,000	
4.2b Capa 4.3 115k 4.3a Circu 4.3b Capa FOTAL - MAJOR EQU 5. SMALL EQUIPTME	acitor Banks ikV uilt Breakers acitor Banks QUIPTMENT RENT / MATERIALS	0	EA EA	\$ -	\$ -			\$ 42,000	
4.3 115k 4.3a Circu 4.3b Capa TOTAL - MAJOR EQU 5. SMALL EQUIPTME	SkV Luit Breakers pacitor Banks QUIPTMENT MENT / MATERIALS	0	EA	\$ -	·	\$ 42,000	\$ -	. , , , , ,	5 -
4.3a Circu 4.3b Capa FOTAL - MAJOR EQU 5. SMALL EQUIPTME	tuit Breakers acitor Banks QUIPTMENT			<u> </u>					
4.3a Circu 4.3b Capa FOTAL - MAJOR EQU 5. SMALL EQUIPTME	tuit Breakers acitor Banks QUIPTMENT			<u> </u>	A				
4.3b Capa FOTAL - MAJOR EQUIPTME 5. SMALL EQUIPTME	QUIPTMENT IENT / MATERIALS			<u> </u>					
TOTAL - MAJOR EQU	QUIPTMENT IENT / MATERIALS	0	EA		\$ -	\$ -	\$ -	\$ -	\$ -
5. SMALL EQUIPTME	MENT / MATERIALS			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5. SMALL EQUIPTME	MENT / MATERIALS								
					\$ -		\$ -		\$ -
5.1 345k									
J J4JK	ikV								
5.1a Line S	e Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b Disco	connect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c VT'S		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d CT'S		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e CCVT		0	EA	\$ -	\$ -	•	\$ -	\$ 2,500	
5.1f Arres		3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	
	ve Traps	0	EA	\$ -	\$ -		\$ -	\$ 2,500	
	tion Service Transformers	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1i State	tion service mansionners	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1		0	EA	-	, -	, -	, -	, -	, -
5.2 230k	NAV								
		0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	e Switches - 3ph w/ motor operator			+	T				
	connect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2c VT'S		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d CT'S		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e CCVT		0	EA	\$ -	\$ -		\$ -	\$ 1,500	
5.2f Arres		0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	ve Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	tion Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3 115k									
	e Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b Disco	connect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.3c VT'S	S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3d CT'S	S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3e CCVT	/T'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	esters	0	EA	\$ -		\$ 1,500		\$ 1,500	
	ve Traps	0	EA	\$ -	\$ -			\$ -	
	tion Service Transformers	0	EA	\$ -	\$ -		\$ -		\$ -
5.3j Fuses		0	EA	\$ -	\$ -		\$ -		\$ -
		_		1		·	·		
OTAL - SMALL FOU	UIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
	E / PANELS / GENERATOR						.,,500		,500
	NTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
	tection and Telecom Equipment Panels	0	EA	\$ -					

	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3 1	25VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ow Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10 G	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	OL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS				4	4			4	
	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	
	Rigid Bus, Fittings & Insulators	1	LS	\$ -	\$ -	\$ 10,500.00	· ,	\$ 10,500	
	Strain Bus, Connectors & Insulators	0	EA	\$ - \$ -	\$ - \$ -		\$ - \$ -	\$ 39 \$ 42.000	
	Grounding System	0	EA	\$ -	ş -	\$ 42,000.00	, -	\$ 42,000	\$ -
7.5 7.6									
7.5									
7.7									
7.8									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC IT	TEMS				\$ -		\$ 10,500		\$ 10,500
	bstation - Removal				\$ -		\$ 122,000		\$ 122,000
8. MOB/DEMOB	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
	Mob / Demob	1	LS	\$ -	\$ -	\$ 1,220	\$ 1,220	\$ 1,220	\$ 1,220
P	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 4,637	\$ 4,637	\$ 4,637	\$ 4,637
8.3 U	Jtility PM and Project Oversite	1	LS		\$ -	\$ 1,220	\$ 1,220	\$ 1,220	\$ 1,220
8.4 S	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 1,220	\$ 1,220	\$ 1,220	\$ 1,220
E	ngineering								
	Design Engineering	1	LS	\$ -	\$ -	\$ 9,760	\$ 9,760	\$ 9,760	
	iDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Surveying/Staking	-	Site	\$ -	\$ -	\$ 854	\$ -	\$ 854	\$ -
	Testing & Commissioning								
	esting & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 3,050	\$ -	\$ 3,050	\$ -
	Permitting and Additional Costs			_	_		_		
	nvironmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Invironmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Narranties / LOC's	1	LS	\$ -	\$ -		\$ 366	\$ 366	·
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	7	\$ -	\$ -	\$ -	\$ -
	egal Fees	-	LS	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	Allowance for Funds Used During Construction (AFUDC)	-	LS LS	·	7	\$ - \$ -			·
8.17 8.18 S	iales Tax on Materials	- 1	LS	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	Fees for permits, including roadway, railroad, building or other local permits		LS	· ·	\$ -		\$ -	\$ -	
	EMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	-	LS		\$ -	122	\$ 18,423	122 ب	\$ 18,423
. JIAL WOD/DI	Emos, Enamelino, reminimo, rac, rara monters.				· · · · · ·		7 10,425		7 10,423

H. New Scotland Substation - Install

Estimate Revision: 5 Total: \$ 9,382,733

NAT & NYPA - T027 - (Seg	NAT & NYPA - T027 - (Segment A, Double Circuit)									
		Supply	Installation		Total					
H. New Scotland Substation - Install										
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	32,400	\$ 90,000	\$	122,400					
2. SUBSTATION FOUNDATIONS	\$	615,528	\$ 659,200	\$	1,274,728					
3. SUBSTATION STRUCTURES	\$	296,000	\$ 296,000	\$	592,000					
4. MAJOR EQUIPTMENT	\$	800,000	\$ 320,000	\$	1,120,000					
5. SMALL EQUIPTMENT / MATERIALS	\$	590,500	\$ 329,500	\$	920,000					
6. CONTROL HOUSE / PANELS	\$	937,050	\$ 660,000	\$	1,597,050					
7. MISC ITEMS	\$	826,181	\$ 1,183,505	\$	2,009,686					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	327,813	\$ 1,419,056	\$	1,746,869					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-					
SUBTOTAL:	\$	4,425,472	\$ 4,957,261	\$	9,382,733					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-					
TOTAL:	\$	4,425,472	\$ 4,957,261	\$	9,382,733					

Descr	iptic	on of	Wo	rk:

Item	ltem Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
H. New S	Scotland Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	1,200	CY	\$	27	\$ 32,400			\$ 102	
1.3	Substation Fence	0	LF	\$		\$ -	\$ 100	'	\$ 200	
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
	REP/ GRADING/ FENCING / CIVIL					\$ 32,400		\$ 90,000		\$ 122,400
	N FOUNDATIONS									
	345kV									
	Circuit Breaker Foundations	4	EA	\$	14,940	\$ 59,760			\$ 30,940	
	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000		\$ 116,025	
	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$	26,145	\$ 209,160			\$ 54,145	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000		\$ 54,145	
2.1e	Switch Stand Foundations	24	EA	\$	4,482	\$ 107,568			\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	·	\$ 9,282	
	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	21		\$	4,482	\$ 94,122			\$ 9,282	
	Instrument Transformer Stand Foundations	21	EA	\$	4,482	\$ 94,122		\$ 100,800	\$ 9,282	
	Arrester Stand Foundations	6	EA	\$	4,482	\$ 26,892			\$ 9,282	
	Wave Trap Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
2.2	230kV									
	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$,	\$ -	\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
										Page 30 of 63

2.2d Caison DE Foundations (for De A frame strshared column)	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	16,410 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735 \$ - 7,735
2.21 Station Service Transformer Stand Foundation	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	7,735 \$ -
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2.2m	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	7,735 \$ \$ -
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2.3 115kV	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	10,829 \$ - 19,615 \$ - 34,034 \$ - 4,034 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ -
2.3a Circuit Breaker Foundations 0 EA S 5,229 S S 5,600 S	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	59,615 \$ - \$4,034 \$ - \$4,034 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ -
2.3b Capacitor Bank Foundations 0 EA 5 33,615 5 - 5 36,000 5	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	59,615 \$ - \$4,034 \$ - \$4,034 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ - \$6,188 \$ -
Caisson DE Foundations (for DE A frame str stand alone)	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	34,034 \$ - 34,034 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ -
Caisson DE Foundations (for DE A frame str shared column)	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	34,034 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ -
2.3e Switch Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - - 5,188 \$ -
2.3f Fuse Stand Foundations 0 EA \$ 2,988 \$. \$ 3,200 \$ \$ 2.3g Bus Support 3ph Foundations 0 EA \$ 2,988 \$. \$ 3,200 \$ \$ \$ 2.3h Bus Support 1 Ph Foundations 0 EA \$ 2,988 \$. \$ 3,200 \$ \$ \$ 2.3h Bus Support 1 Ph Foundations 0 EA \$ 2,988 \$. \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$ - \$ - \$ - \$	6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - - 5,188 \$ -
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2.3h Bus Support 1 Ph Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$ - \$	6,188 \$ - 6,188 \$ - 6,188 \$ - 6,188 \$ - - \$ -
2.3j Instrument Transformer Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ 2.3k Arrester Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ 2.3m Wave Trap Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ 2.3m Wave Trap Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$ - \$	6,188 \$ - 6,188 \$ - - \$ -
2.3m Wave Trap Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ \$ \$ \$ \$ \$ \$ \$ \$	- \$ - \$	6,188 \$ - - \$ -
2.3n Station Service Foundations 0 EA \$ - \$ - \$ 5 - \$ 5	- \$	- \$ -
2.3p Misc. Structure Foundations 0 EA \$ - \$ - \$ - \$ \$ - \$ \$		
2.4 Transformer Foundations 0 EA \$ 97,110 \$ - \$ 104,000 \$ \$ 2.4a 345-230kV Transformer Foundation w/ Oil Containment 0 EA \$ 97,110 \$ - \$ 104,000 \$ \$ 2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ 74,700 \$ - \$ 80,000 \$ \$ \$ 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ \$ - \$ \$ \$	- \$	- \$ -
2.4a 345-230kV Transformer Foundation w/ Oil Containment 0 EA \$ 97,110 \$ - \$ 104,000 \$ 2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ 74,700 \$ - \$ 80,000 \$ 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ \$ - \$ 2.4d 115kV-69kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ 2.4d 115kV-69kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ 2.5d Control House Foundations / Pad 0 EA \$ 76,194 \$ - \$ 81,600 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ 2.6d Lightning Mast Foundations 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 2.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 2.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 2.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 2.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA 5 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.6d Told Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 3.		
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2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ 2.4d 115kV-69kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ 2.5 Control House Foundations / Pad 0 EA \$ 76,194 \$ - \$ 81,600 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ 2.6a 10' Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$	- \$ 2	01,110 \$ -
2.4d 115kV-69kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ 2.5 Control House Foundations / Pad 0 EA \$ 76,194 \$ - \$ 81,600 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ 2.6a 70' Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$	- \$ 1	54,700 \$ -
2.5 Control House Foundations / Pad EA \$ 76,194 \$ - \$ 81,600 \$ 2.5a Control House / Pad 0 EA \$ 16,000 \$ - \$ 17,000 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ 2.6 Lightning Mast Foundations 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$	- \$	- \$ -
2.5a Control House / Pad 0 EA \$ 76,194 \$ - \$ 81,600 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ 2.6 Lightning Mast Foundations 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$	- \$	- \$ -
2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ 2.6 Lightning Mast Foundations 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$		
2.6 Lightning Mast Foundations EA \$ 5,229 \$ 10,458 \$ 5,600 \$ 2.6a 70' Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$	- \$ 1	57,794 \$ -
2.6a 70' Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,458 \$ 5,600 \$	- \$	33,000 \$ -
	11,200 \$	10,829 \$ 21,658
2.6b 0 EA \$ - \$ - \$	- \$	- \$ -
2.6c 0 EA \$ - \$ - \$	- \$	- \$ -
TOTAL - SUBSTATION FOUNDATIONS \$ 615,528 \$	659,200	\$ 1,274,728
3. SUBSTATION STRUCTURES		
3.1 345kV		
3.1a Substation A-Frame Structures - Stand alone 2 EA \$ 37,000 \$ 74,000 \$ 37,000 \$		74,000 \$ 148,000
3.1b Substation A-Frame Structures - Shared Column 0 EA \$ 37,000 \$ - \$ 37,000 \$		74,000 \$ -
3.1c Switch Stands 4 EA \$ 14,800 \$ 59,200 \$ 14,800 \$, ,	29,600 \$ 118,400
3.1d Station Service Transformer Stand 0 EA \$ 14,800 \$ - \$ 14,800 \$		29,600 \$ -
3.1e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ 3.1f Bus Support 1 Ph 21 EA \$ 3.700 \$ 77.700 \$ 3.700 \$	- \$	- \$ -
	77,700 \$ 38,850 \$	7,400 \$ 155,400 3,700 \$ 77,700
3.1g Instrument Transformer Stand 21 EA \$ 1,850 \$ 38,850 \$ 1,850 \$ 3.1h Arrester Stand 6 EA \$ 1,850 \$ 11,100 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,850	38,850 \$ 11,100 \$	3,700 \$ 77,700 3,700 \$ 22,200
3.1n Arrester stand 6 EA \$ 1,850 \$ 11,100 \$ 1,850 \$ 3.1j Wave Trap Stand 3 EA \$ 7,400 \$ 22,200 \$ 7,400 \$		3,700 \$ 22,200 14,800 \$ 44,400
3.14 Vever in 9 2 2 EA \$ 6,475 \$ 12,950 \$ 6,475 \$		12,950 \$ 25,900
3.2 230kV		C C00 ¢
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 33,300 \$		66,600 \$ -
3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ 33,300 \$ \$ 33,300 \$ \$ 33,300 \$ \$ 33,300 \$ \$ 33,300 \$ \$ 33,300 \$ \$ \$ 33,300 \$ \$ \$ 33,300 \$ \$ \$ 33,300 \$ \$ \$ 33,300 \$ \$ \$ \$ \$ \$ \$ \$ \$		66,600 \$ -
3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$ \$ 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$ \$	- \$	24,050 \$ -
3.2d Station Service transformer Stand	- \$ - \$	7
3.2e ous support spin 0 EA \$ -75	- \$ - \$ - \$	
3.21 Sussupport 2 in 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 5 2,773 5 - 7 2,773 5	- \$ - \$ - \$ - \$	- \$ - 5.550 \$ -
3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$	- \$ - \$ - \$	- \$ - 5,550 \$ - 2,590 \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2j	Wave Trap Stand	0	EA	\$	5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
3.2k	Misc. Structures	0		\$	6,475		\$ 6,475		\$ 12,950	\$ -
				Ť	2,	*	7	- -	7 ==,,,,,	*
3.3	115kV									
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0		\$	18,500		\$ 18,500		\$ 37,000	\$ -
3.3c	Switch Stands	0		\$	7,955		\$ 7,955	\$ -		\$ -
3.3d	Fuse Stand	0		\$	7,955		\$ 7,955	\$ -	\$ 15,910	
3.3e	Bus Support 3ph	0	EA	\$	3,330		\$ 3,330		\$ 6,660	•
3.3f	Bus Support 1 Ph	0		\$	1,850		\$ 1,850			\$ -
3.3g	Instrument Transformer Stand	0		\$	740		\$ 740		\$ 1,480	•
3.3h	Arrester Stand	0	EA	\$	740	\$ -	\$ 740	\$ -		\$ -
3.3j	Wave Trap Stand	0		\$	3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	Ś	6,475	\$ -	\$ 6,475	\$ -		\$ -
				Ť	2,	*	7 0,	- T	7	*
TOTAL - SUBS	TATION STRUCTURES					\$ 296,000		\$ 296,000		\$ 592,000
4. MAJOR EQU										+
4.1	345kV									
4.1a	Circuit Breakers	4	EA	\$	200,000	\$ 800,000	\$ 80,000	\$ 320,000	\$ 280,000	\$ 1,120,000
4.1b	Capacitor Banks	0		\$		\$ -	\$ 80,000		\$ 80,000	
4.1c	345 kV - 230 kV Auto Transformer	0		\$		\$ -	\$ 750,000	\$ -		\$ -
4.1d	345 kV - 115 kV Auto Transformer	0		\$		\$ -	\$ 750,000		\$ 750,000	
4.2	230kV	J. Contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of	E/ \	Ť		<u> </u>	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Ŷ	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	¥
4.2a	Circuit Breakers	0	EA	\$	115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0		\$		\$ -	\$ 80,000		\$ 80,000	
4.20	Capacitor Banks		LA.	Ť		7	\$ 00,000	7	ÿ 00,000	-
4.3	115kV									
4.3a	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0		\$		\$ -	\$ 60,000	\$ -	\$ 60,000	•
4.30	Capacitor banks	0		7		· -	5 00,000	· -	ÿ 00,000	-
TOTAL - MAIO	L Dr Equiptment					\$ 800,000		\$ 320,000		\$ 1,120,000
	IPTMENT / MATERIALS					\$ 000,000		320,000		7 1,120,000
5.1	345kV									
5.1a	Line Switches - 3ph w/ motor operator	2	EA	Ś	40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$ 110,000
5.1b	Disconnect Switches - 3ph w/ manual operator	4		\$		\$ 140,000	\$ 17,500	\$ 70,000	\$ 52,500	\$ 210,000
5.1c	VT'S	6	EA	\$	13,000				\$ 25,000	
5.1d	CT'S	6	EA	\$	13,000			\$ 48,000		\$ 126,000
5.1e	CCVT'S	9	EA	\$	13,000		\$ 8,000	\$ 72,000	\$ 21,000	\$ 189,000
5.1f	Arresters	9	EA	s	6,500	\$ 58,500	\$ 1,500	\$ 13,500	\$ 8,000	\$ 72,000
5.1g	Wave Traps	3	EA	\$	13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1h	Station Service Transformers	0		s	200,000		\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j	Station Service Hallstormers		2,1	Ť	200,000	y	30,000	Ÿ	Ç 250,000	*
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$	35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0		\$		\$ -	\$ 17,500	\$ -	\$ 47,500	
5.2c	VT'S	0		\$	13,000	т	\$ 8,000	\$ -	\$ 21,000	
5.2d	CT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0		\$			\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$	5,000		\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0		\$		•	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0		\$		\$ -	\$ -	\$ -	\$ -	\$ -
5.2j				Ť		7	-	-	T	T
5.2,										
5.3	115kV									
			EA	\$	33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
	Line Switches - 3ph w/ motor operator			1.7						
5.3a	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0		Ś	28 NNN 1	S - 1	\$ 17500	S -	\$ 45 500 l	
5.3a 5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	28,000 13.000		\$ 17,500 \$ 8,000		\$ 45,500 \$ 21,000	
5.3a 5.3b 5.3c	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.3a 5.3b 5.3c 5.3d	Disconnect Switches - 3ph w/ manual operator VT'S CT'S	0 0 0	EA EA EA	\$	13,000 13,000	\$ - \$ -	\$ 8,000 \$ 8,000	\$ - \$ -	\$ 21,000 \$ 21,000	\$ - \$ -
5.3a 5.3b 5.3c 5.3d 5.3e	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	0 0 0 0	EA EA EA	\$ \$ \$	13,000 13,000 8,000	\$ - \$ - \$ -	\$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 21,000 \$ 16,000	\$ - \$ - \$ -
5.3a 5.3b 5.3c 5.3d 5.3e 5.3f	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	0 0 0 0	EA EA EA EA	\$ \$ \$ \$	13,000 13,000 8,000 3,420	\$ - \$ - \$ - \$ -	\$ 8,000 \$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$ - \$ -	\$ 21,000 \$ 21,000 \$ 16,000 \$ 9,420	\$ - \$ - \$ - \$ -
5.3a 5.3b 5.3c 5.3d 5.3e 5.3f 5.3g	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	0 0 0 0 0	EA EA EA EA EA	\$ \$ \$ \$ \$	13,000 13,000 8,000 3,420	\$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 8,000 \$ 8,000 \$ 6,000 \$ -	\$ - \$ - \$ - \$ -	\$ 21,000 \$ 21,000 \$ 16,000 \$ 9,420 \$ -	\$ - \$ - \$ - \$ - \$ -
5.3a 5.3b 5.3c 5.3d 5.3e 5.3f	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	0 0 0 0	EA EA EA EA EA EA	\$ \$ \$ \$	13,000 13,000 8,000 3,420	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 8,000 \$ 8,000 \$ 6,000 \$ - \$ -	\$ - \$ - \$ - \$ -	\$ 21,000 \$ 21,000 \$ 16,000 \$ 9,420 \$ - \$ -	\$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
TOTAL - SMALL	EQUIPTMENT / MATERIALS					\$ 590,500		\$ 329,500		\$	920,000
	DUSE / PANELS / GENERATOR					+ 000,000		-		-	
6.1	CONTROL HOUSE	1	EA	\$	243,750	\$ 243,750	\$ 42,500	\$ 42,500	\$ 286,250	\$	286,250
6.2	Protection and Telecom Equipment Panels	8	EA	\$	35,000	\$ 280,000	\$ 15,000	\$ 120,000	\$ 50,000	\$	400,000
6.3	125VDC Batteries	1	EA	\$	75,000	\$ 75,000	\$ 25,000	\$ 25,000	\$ 100,000	\$	100,000
	Control Cables	1	LS	\$	338,300	\$ 338,300	\$ 472,500	\$ 472,500	\$ 810,800	\$	810,800
	SCADA and Communications	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	Low Voltage AC Distribution	0	EA	\$		\$ -	,	\$ -	\$ 150,000	\$	-
	DC Distribution System	0	EA	\$	50,000		\$ 100,000		\$ 150,000	\$	-
	Security	0	EA	\$	7,500		\$ 7,500		\$ 15,000	_	-
	Fire Alarm	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$	-
TOTAL - CONTE	ROL HOUSE / PANELS / GENERATOR					\$ 937,050		\$ 660,000		\$	1,597,050
7. MISC ITEMS											
	Conduit & Cable Trench System	1,500	LF	\$	185.00	\$ 277,500	\$ 170.00	\$ 255,000	\$ 355	\$	532,500
	Rigid Bus, Fittings & Insulators	800	LF	\$	125.07		\$ 237.10		\$ 362		289,736
	Strain Bus, Connectors & Insulators	500	LF	\$	39.30	\$ 19,650	\$ 53.35	\$ 26,675	\$ 93	\$	46,325
	Grounding System	7,500	LF	\$	6.93		\$ 32.58		\$ 40		296,325
	Strain Bus Insulators - 345kV	36	EA	\$	2,000				\$ 3,050	\$	109,800
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$	-
7.7	Strain Bus Insulators - 115kV	0	EA	\$	1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$	-
7.8	Low Voltage AC Station Service	0	LS	\$	50,000	\$ -	\$ 75,000	\$ -	\$ 125,000	\$	-
7.9	SSVT Service	0	LS	\$	45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	\$	-
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12	Install new communication tower foundation.	1	LS				\$ 75,000	\$ 75,000	\$ 75,000	\$	75,000
	Relocate existing communication tower.	1	LS				\$ 50,000	\$ 50,000	\$ 50,000	\$	50,000
7.14											
7.15				-							
7.16											
7.17				-							
7.18											
7.19 7.20											
7.20				-							
7.22											
7.23				+							
7.24				+							
7.25											
TOTAL - MISC	ITEMS					\$ 826,181		\$ 1,183,505		Ś	2,009,686
H Now S	cotland Substation - Install					\$ 4,097,659		\$ 3,538,205		Ś	7,635,864
						7 4,037,033		3,330,203		7	7,033,004
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization	1	LS	Ś		\$ -	ć 76.3F0	ć 76.3F0	ć 76.3F0	Ś	76.350
	Mob / Demob Project Management, Material Handling & Amenities	1	LS	,	-	\$ -	\$ 76,359	\$ 76,359	\$ 76,359	Ş	76,359
	Project Management, Material Handling & Amenities										
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 290,220	\$ 290,220	\$ 290,220	\$	290,220
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 76,359	\$ 76,359	\$ 76,359	\$	76,359
	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 76,359	\$ 76,359	\$ 76,359	\$	76,359
	Engineering										
	Design Engineering	1	LS	\$		\$ -	\$ 610,869	\$ 610,869	\$ 610,869		610,869
	Lidar	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$	-
	Geotech	4	EA	\$		\$ -	\$ 3,500		\$ 3,500		14,000
	Surveying/Staking	1	Site	\$	-	\$ -	\$ 53,451	\$ 53,451	\$ 53,451	\$	53,451
	Testing & Commissioning			1		_					
	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 190,897	\$ 190,897	\$ 190,897	Ş	190,897
	Permitting and Additional Costs		15	ė		ė	ė	ė	ė	ć	
	Environmental Licensing & Permitting Costs	-	LS LS	\$				\$ - \$ -	\$ -	\$	<u> </u>
0.11	Environmental Mitigation	<u> </u>	L)	l >	-		- ډ	- د	- دا	Þ	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 22,908	\$ 22,908	\$ 22,908	\$ 22,908
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 327,813	\$ 327,813	\$ -	\$ -	\$ 327,813	\$ 327,813
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 7,636	\$ 7,636	\$ 7,636	\$ 7,636
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 327,813		\$ 1,419,056		\$ 1,746,869

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H. SS New Scot.-Install

I. New Scotland Substation - Removal

Estimate	5	Total:	\$	93,577
Revision:			-	,

NAT & NYPA - T027 - (Segment	A, Double Circuit)			
	Supply		Installation	Total
I. New Scotland Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	Ş	-	\$ -
2. SUBSTATION FOUNDATIONS	\$ -	,	28,800	\$ 28,800
3. SUBSTATION STRUCTURES	\$ -	,	27,000	\$ 27,000
4. MAJOR EQUIPTMENT	\$ -	\$	-	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$	4,500	\$ 4,500
6. CONTROL HOUSE / PANELS	\$ -	Ş	-	\$ -
7. MISC ITEMS	\$ -	,	21,000	\$ 21,000
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -	,	12,277	\$ 12,277
CONTRACTOR MARK-UP (OH&P)	\$ -	Ş	-	\$ -
SUBTOTAL:	\$ -	,	93,577	\$ 93,577
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$	-	\$ -
TOTAL:	\$ -	,	93,577	\$ 93,577

New Scotland Substation - Removal	Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1.1 Site Works including clearing, sediment controls, rough grading, and final grading. 0 ARIS S S 320,000 S S 203,000 S S 203,000 S S S S S S S S S	I. New S	cotland Substation - Removal								
1.2 Station stone within substation fence.	1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.3 Substation Fence	1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.4	1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.5		Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.6	1.4									
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
Table										
S										
2.13 345W 2.1a Circuit Breaker Foundations 0 EA 5 - 5 5 5 5 5 5 5 5										
2.1 345kV	TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2.1a Circuit Breaker Foundations 0 EA \$ -										
2.1b Capacitor Bank Foundations 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	2.1									
2.1c Caisson DE Foundations (for DE A frame str stand alone)					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d Caisson DE Foundations (for DE A frame str shared column)	2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e Switch Stand Foundations 0 EA \$ - \$ \$ - \$ \$ - \$ \$ \$			0		\$ -	\$ -	\$ -	\$ -	\$ -	т
2.1f Station Service Transformer Stand Foundation 0 EA \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$	2.1d		0	EA	7	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g Bus Support 3ph Foundations 0 EA \$ -					т	\$ -	7	т	\$ -	т
2.1h Bus Support 1 Ph Foundations 12 EA \$ - \$ - \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 28,800 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400 \$ 2,400	2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1 Instrument Transformer Stand Foundations 0 EA \$ -					\$ -	\$ -			т	
2.1k Arrester Stand Foundations 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <th< td=""><td></td><td>Bus Support 1 Ph Foundations</td><td>12</td><td>EA</td><td>\$ -</td><td>\$ -</td><td>\$ 2,400</td><td>\$ 28,800</td><td>\$ 2,400</td><td></td></th<>		Bus Support 1 Ph Foundations	12	EA	\$ -	\$ -	\$ 2,400	\$ 28,800	\$ 2,400	
2.1m Wave Trap Stand Foundations 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <t< td=""><td>2.1j</td><td>Instrument Transformer Stand Foundations</td><td>0</td><td>EA</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td></t<>	2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n Misc. Structure Foundations 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <t< td=""><td>2.1k</td><td>Arrester Stand Foundations</td><td>0</td><td>EA</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td><td>\$ -</td></t<>	2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td>Wave Trap Stand Foundations</td> <td>0</td> <td>EA</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td>		Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2 230kV 2.2a Circuit Breaker Foundations 0 EA \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000	2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2a Circuit Breaker Foundations 0 EA \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ - \$ - \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - <	2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2a Circuit Breaker Foundations 0 EA \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ - \$ - \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 7,200 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - \$ 32,000 \$ - <										
2.2b Capacitor Bank Foundations 0 EA \$ - \$ - \$ 32,000 \$ - \$ 32,000 \$ -										
					т	т				
2.2c Caisson DE Foundations (for DE A frame str stand alone) 0 EA \$ - \$ - \$ 22,000 \$ -	2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -				
	2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ 11,000	\$ -	\$ 11,000	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -		\$ -		\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -		\$ -	\$ 2,400	
2.2k	Arrester Stand Foundations	0	EA EA	\$ - \$ -	\$ - \$ -	\$ 2,400 \$ -	\$ - \$ -	\$ 2,400 \$ -	\$ - \$ -
2.2m 2.2n	Wave Trap Stand Foundations Misc. Structure Foundations	0	EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -		\$ - \$ -
2.2p	IVISC. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
Елер		Ü	Lr.	Ţ	<u> </u>	Ť	*	*	*
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -		\$ -		\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -		\$ -		\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3g	Bus Support 3ph Foundations	0	EA EA	\$ -	\$ - \$ -		\$ - \$ -		\$ -
2.3h	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	0	EA EA	\$ -	\$ - \$ -		\$ - \$ -		\$ - \$ -
2.3j 2.3k	Arrester Stand Foundations	0	EA EA	\$ -	\$ -		\$ -		\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	·	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
•									
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -		\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	_	\$ -	<u> </u>	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	STATION FOUNDATIONS				\$ -		\$ 28,800		\$ 28,800
3.1	ON STRUCTURES 345kV								
∡ 1 a		0	ΕΛ	Ġ _	ė -	ė -	ė -	¢ -	ė _
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b 3.1c	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0	EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ - \$ -	\$ - \$ -
3.1b 3.1c 3.1d	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 0 0	EA EA EA	\$ - \$ - \$	\$ - \$ - \$ -	\$ - \$ - \$ -	\$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ - \$ - \$ -
3.1b 3.1c 3.1d 3.1e	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ -
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0 0 12 0	EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ -
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	0 0 0 0 12 0 0	EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ - \$ -
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0 0 12 0	EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ -
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70'	0 0 0 0 12 0 0	EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ - \$ -
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1h 3.1j 3.1k	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70'	0 0 0 12 0 0 0	EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 27,000 \$ - \$ - \$ - \$ - \$ -
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ 4,500	\$ -	\$ 4,500	\$ -
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AARIN								
3.3	115kV		EA.	ć	ć	ć 4F.000	ć	ć 4F.000	A
3.3a	Substation A-Frame Structures - Stand alone	0		\$ -	\$ - \$ -		\$ -	\$ 15,000	
3.3b 3.3c	Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ -	\$ - \$ -	\$ - \$ 6,450	\$ - \$ -	\$ - \$ 6,450	\$ - \$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0		\$ -	\$ -		\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION STRUCTURES				\$ -		\$ 27,000		\$ 27,000
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -		\$ -		\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV		EA.	ć	ć	ć 7,000	ć	ć 7,000	A
4.2a	Circuit Breakers	0		\$ -	\$ - \$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3a 4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.50	Capacitor Bariks	0	EA	, -	· -	· -	· -	, -	· -
TOTAL - MAJO	DR EQUIPTMENT				\$ -		\$ -		\$ -
	JIPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.1f	Arresters	3	EA	\$ -	\$ -		\$ 4,500	\$ 1,500	
5.1g	Wave Traps	0	EA	\$ -	\$ -		\$ -	\$ 2,500	
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j									
5.2	230kV		Γ^	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	ć
5.2a	Line Switches - 3ph w/ motor operator	0	EA EA	+'	\$ - \$ -	,		,	
5.2b 5.2c	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA EA	\$ -	\$ -		\$ - \$ -	\$ 5,500 \$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -		\$ -	\$ - \$ -	\$ -
5.2u 5.2e	CCVT'S	0	EA	\$ -	\$ -		\$ -	\$ 1,500	
5.2f	Arresters	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -			\$ 5,500	
5.3c	VT'S	0		\$ -	\$ -		\$ -	\$ -	
5.3d	CT'S	0		\$ -			\$ -		\$ -
5.3e	CCVT'S	0		\$ -	\$ -		\$ -		\$ -
5.3f	Arresters	0		\$ -		\$ 1,500		\$ 1,500	
5.3g	Wave Traps	0		\$ -	\$ -		\$ -	\$ -	
5.3h	Station Service Transformers	0		\$ -	\$ -		\$ -		\$ - \$ -
5.3j	Fuses	0	EA	-	-	\$ -	\$ -	\$ -	\$ -

CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGED CONTROL HOUSE PARKES ARRENGE	Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1 CONTROL HOUSE	TAL - SMALI	EQUIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
B CONTOL HOUSE						Ť		,,555		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6.3 PANICS			0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
8.3 125VOC Rateries					Š -	\$ -			\$ -	\$ -
6.4 Protection and Telecom Equipment 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$						\$ -	\$ -		\$ -	\$ -
6.5 SCADA and Communications 0 6.4 \$ \$ \$ \$ \$ \$ \$ \$ \$						S -			\$ -	\$ -
6.5 Low Voltage AC Distribution 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$						<u> </u>			\$ -	\$ -
6.7 OC Distribution System							•		\$ -	\$ -
B. A. Security						<u> </u>	· -		\$ -	\$ -
6.9 Fire Alarm						т	'		\$ -	\$ -
EAD Generator						<u> </u>			\$ -	\$ -
TOTAL - COURDE HOUSE / PARIES / GENERATOR									\$ -	\$ -
7. MSC (TRMS)	0.10	Generator	0	EA	-	-	-	-	· -	-
7.1 Conduit & Cable Trench System 0 EA	TAL - CONT	POL HOUSE / DANEIS / GENERATOR				ċ		\$ -		\$ -
7.1 Conduit & Cable Trench System						, -		, -		, -
7.2 Rigid Bus, Fittings & Insulators			0	ΕΛ	ć	ė	¢ 42,000,00	¢ -	\$ 42,000	\$ -
7.3 Strain Bus, Connectors & Insulators						·			\$ 42,000	
7.4 Grounding System						т	, , , , , , , , , , , , , , , , , , , ,			
7.5						·			\$ 21,000	
7.6		Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.7										
7.8										
7.9										
7.10										
7.11										
7.12										
7.13										
7.14										
T.15										
New Scotland Substation - Removal S										
New Scotland Substation - Removal										
S. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization	TAL - MISC	ITEMS				\$ -		\$ 21,000		\$ 21,000
Section Contractor Mobilitation / Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation Demobilitation De	New So	cotland Substation - Removal				\$ -		\$ 81,300		\$ 81,300
Contractor Mobilization / Demobilization State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State S								,		
8.1 Mob / Demob 1.0 LS \$ - \$ - \$ \$ 813 \$	VIOB/ DEIVIC									
Project Management, Material Handling & Amenities	0.1		1.0	1.0			ć 012	ć 012	ć 042	ć 042
R.2	8.1		1.0	LS	\$ -	\$ -	\$ 813	\$ 813	\$ 813	\$ 813
8.2 and Cost Manager, SHEQ Staff, and Admin Staff)		Project Management, Material Handling & Amenities								
8.2 and Cost Manager, SHEQ Staff, and Admin Staff)		Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler								
8.3 Utility PM and Project Oversite	8.2		1	LS			\$ 3,090	\$ 3,090	\$ 3,090	\$ 3,090
Site Accommodation, Facilities, Storage									4	
Engineering					ļ.,	Ÿ			\$ 813	
See Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segret Segr	8.4		1	LS	Ş -	Ş -	\$ 813	\$ 813	\$ 813	\$ 813
8.6 LIDAR										
8.7 Geotech - Site \$ - \$ - \$ 8.8 Surveying/Staking - Site \$ - \$ - \$ 569 \$ Testing & Commissioning of T-Line and Equipment - LS \$ - \$ 2,033 \$ Permitting and Additional Costs - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -<						Т				
8.8 Surveying/Staking - Site \$ - \$ 5 569 \$						7			\$ -	\$ -
Testing & Commissioning Fuline and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipme									\$ -	\$ -
8.9 Testing & Commissioning of T-Line and Equipment - LS \$ - \$ 2,033 \$ Permitting and Additional Costs - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	8.8		-	Site	\$ -	\$ -	\$ 569	\$ -	\$ 569	\$ -
Note										
8.10 Environmental Licensing & Permitting Costs - LS \$ - \$ - \$ 8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 2,033	\$ -	\$ 2,033	\$ -
8.11 Environmental Mitigation - LS \$ - \$ - \$ 8.12 Warranties / LOC's 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>										
8.11 Environmental Mitigation - LS \$ - \$ - \$ 8.12 Warranties / LOC's 1 LS \$ - \$ - \$ 244 \$ 8.13 Real Estate Costs (New) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	8.10	Environmental Licensing & Permitting Costs	-	LS		\$ -	7		\$ -	\$ -
8.13 Real Estate Costs (New) - LS \$ - \$ - \$ 8.14 Real Estate Costs (Incumbent Utility) - LS \$ - \$ - \$ 8.15 Legal Fees - LS \$ - \$ - \$	8.11		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.13 Real Estate Costs (New) - LS \$ - \$ - \$ 8.14 Real Estate Costs (Incumbent Utility) - LS \$ - \$ - \$ 8.15 Legal Fees - LS \$ - \$ - \$	8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 244	\$ 244	\$ 244	\$ 244
8.14 Real Estate Costs (Incumbent Utility) - LS \$ - \$ - \$ 8.15 Legal Fees - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						\$ -			\$ -	\$ -
8.15 Legal Fees - LS \$ - \$ - \$			-						\$ -	\$ -
			_			·			\$ -	\$ -
L X.16 TAHOWANCE FOR FUNDS USED DUTING CONSTRUCTION (AFUDC)	8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	Š -	Š -	\$ -	\$ -	š -
8.17 - LS \$ - \$ - \$						·			\$ -	\$ -
6.1/ 1 LS \$ - \$ - \$ - \$ - \$ 8.18 Sales Tax on Materials 1 LS \$ - \$ - \$ - \$ - \$		Sales Tay on Materials				<u> </u>			\$ -	\$ -
8.19 Fees for permits, including roadway, railroad, building or other local permits - LS \$ - \$ - \$ 81 \$			1		ļ* -					\$ -
8.19 rees for permits, including roadway, railroad, building or other local permits - LS \$ - \$ 81 \$ TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: \$ - \$ \$			-	LS		· · · · · · · · · · · · · · · · · · ·	81		Ş 81	\$ 12,277

J. Porter Substation - Install

Estimate Revision: 5 Total: \$ 86,130

NAT & NYPA - T027 - (Segment	A, Doubl	e Circuit)		
		Supply	Installation	Total
J. Porter Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ -	\$ -
3. SUBSTATION STRUCTURES	\$	-	\$ -	\$ -
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ -	\$ -
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$ -
7. MISC ITEMS	\$	15,008	\$ 56,904	\$ 71,912
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,201	\$ 13,017	\$ 14,217
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	16,209	\$ 69,921	\$ 86,130
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	16,209	\$ 69,921	\$ 86,130

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Porter	Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
1.3	Substation Fence	0	LF	\$ 100		\$ 100		\$ 200	
1.4	Permanent Access Road - 20'-Wide	0	LF	\$ 35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS								
	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ 14,940		\$ 16,000		\$ 30,940	
	Capacitor Bank Foundations	0	EA	\$ 56,025		\$ 60,000		\$ 116,025	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145		\$ 28,000		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145		\$ 28,000		\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
	Station Service Transformer Stand Foundation	0	EA	\$ 4,482	<u> </u>	\$ 4,800		\$ 9,282	
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
	Arrester Stand Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
2.1m	Wave Trap Stand Foundations	0	EA	\$ 4,482		\$ 4,800	·	\$ 9,282	-
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -

2.20 South Chast Foundations 0 FA 5 373% 5 5 4,000 5 5 7738 5 5 4,000 5 5 7738 5 5 4,000 5 5 7738 5 5 4,000 5 5 7738 5 5 4,000 5 5 7738 5 5 4,000 5 5 7738 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 4,000 5 5 7738 5 5 5 5 5 5 5 5 5	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.71 Substant Service Transformer Stand Foundations 0 FA 5 3,778 5 5 4,000 5 5 7,738	2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
224 Bio-Compart In Promotions 0 TA 5					. ,	\$ -		\$ -		
2.20									, , , , , ,	
2.29									·	\$ -
2,24 American Stand Foundations 0 EA 5 3,755 5 5 4,000 5 5 7,735								·		
2-20 Wave Trap Stand Foundations						•	, , , , , , , , , , , , , , , , , , , ,		, , , , ,	
2.79 Miss Serveture Foundations 0 LA 5 5 5 5 5 5 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 7					,		, ,,,,,			
2.20										\$ -
2.3. Circuit Recaler Conditions 0 14 \$ \$, \$,279 \$ \$ \$, \$,600 \$ \$ \$, \$,000 \$ \$ \$ \$, \$,000 \$ \$ \$ \$ \$ \$ \$ \$ \$		Misc. Structure roundations	0	LA	-	-	, -	,	-	-
2-3a Circuit fresher Fundations 0 FA \$ \$,279 \$ \$ \$,500 \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,005 \$ 5,0	2.2	1150/								
2.30 Capacitor Earl Foundations 0 EA \$ 33,05 \$, \$ 36,000 \$, \$ 60,05			0	FΛ	\$ 5,220	Ġ _	\$ 5,600	Ċ -	\$ 10.820	\$ -
2.36 Casson De Foundations (for De A frame str shared column) 0 EA 5 16,484 5 5 17,600 5 5 34,034						<u>' </u>				
23.6 Classon DE Foundations (fin DE A Frame str shared column)						-				
2.3					, .	·				
2.38 Support 3ph Foundations					. ,					
2.39 Sub-support 1 Pri Foundations						·				
2.38	2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.98									,	
2.3m Wine Trap Stand Foundations 0 EA \$ 2,988 \$ \$ 3,200 \$ \$ 5 6,188 \$ 2,39 Ninc Structure Foundations 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$						\$ -			,	
2.38 Station Service Foundations 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$						•				
2.5						Ţ			., ., .,	
2.4						•			-	\$ -
24a 345-230kV Transformer Foundation w/ Oil Containment	2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b 345-115NY Transformer Foundation w/ Oil Containment	2.4	Transformer Foundations								
2.4c 230K/115K/Famsformer Foundation w/ Oil Containment 0 EA 5 5 5 5 5 5	2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4d 115W-69W Transformer Foundation w/ Oil Containment 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$		345-115kV Transformer Foundation w/ Oil Containment			\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.5 Control House Foundations / Pad						т				\$ -
2.5a Control House / Pad	2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5a Control House / Pad	2.5	Control House Foundations / Pad								
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3.38 Sobstation A-rimore Structures - Shared Column O CA \$ 1,500 S \$ 3,500 S \$ 5 3.86 Note Stands O CA \$ 7,700 S \$ 3,500 S \$ 5 3.86 Note Stands O CA \$ 7,700 S \$ 3,500 S \$ 5 3.86 Note Stands O CA \$ 7,700 S \$ 5,700 3.87 Note Stands O CA \$ 7,700 S \$ 5 3.88 Note Stands O CA \$ 7,700 S \$ 5 3.89 Instrument Transformer Stand O CA \$ 7,700 S \$ 7,700 3.80 Instrument Transformer Stand O CA \$ 7,700 S \$ 7,700 S \$ 5 3.81 Annual Stands O CA \$ 7,700 S \$ 7,700 S \$ 5 3.82 Instrument Transformer Stand O CA \$ 7,700 S \$ 7,700 S \$ 5 3.83 Annual Stands O CA \$ 7,700 S \$ 7,700 S \$ 5 3.84 Nove I tay Stands O CA \$ 7,700 S \$ 7,700 S \$ 5 3.85 Annual Stands O CA \$ 7,700 S \$ 7,700 S \$ 5 3.85 Annual Stands O CA \$ 7,700 S \$ 7,700 S \$ 5 3.85 Annual Stands O CA \$ 7,700 S \$ 7,700 S \$ 5 3.85 Annual Stands O CA \$ 7,700 S \$ 7,700 S \$ 5 3.85 Annual Stands O CA \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700 S \$ 7,700			0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.36 Sweet Stands						\$ -				
3.36 Pure Stand						•	,			
3.3 Box Support 1 Ph						•				
2.31 80.0 Support 3 PM 0 1.4 S 7.00 S S 1.50 S S S 1.50 S S S S S S S S S						т				
3.3 Instrument Transformer Variable 0 14 5 740 5 5 740 5 5 5 8 1 5 3 3 1 5 3 3 3 3 3 3 3 3 3						•				
3.5 Arrester Stand						т				
3.3 Wave Trap Stand										
33 Most. Structures										
TOTAL - SUBSTAND STRUCTURES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 4. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIES 5. MAJOR COUNTRIE						т			, , , , ,	
ALD ORGUNE Realers 0 EA 5 200,000 5 5 80,000 5 5 5 2	3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
ALADOR CQUIPMENT										
### 4.13 \$358V						\$ -		\$ -		\$ -
A 1										
4.16 Capactor banks										
4.1c 345 W - 280 W Auto Transformer 0 EA \$ \$ \$ \$ 70,000 \$ \$ \$ 7 \$ \$ \$ \$ \$ \$	4.1a	Circuit Breakers	0	EA	\$ 200,000	\$ -	\$ 80,000	\$ -	\$ 280,000	\$ -
A	4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
A	4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2 Circuit Breakers 0 EA \$ 115,000 \$ \$ \$ \$ \$ \$ \$ \$ \$	4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2 Circuit Breakers 0 EA \$ 115,000 \$ \$ \$ \$ \$ \$ \$ \$ \$	4.2	230kV								
4.3 115W			0	EA	\$ 115.000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.3 115kV						•				
4.3b		Capacitor Barno	-	Σ,	*	<u> </u>	φ σσ,σσσ	¥	φ σσ,σσσ	*
4.3b	43	115kV								
4.3b			0	FΛ	\$ 52,000	ċ _	\$ 60,000	¢ _	\$ 112,000	\$ -
TOTAL - MAJOR EQUIPTMENT	-									
SAMAL BOUPTMENT (MATERIALS	4.50	Capacitor banks	0	EA	, -	· -	3 00,000	ş -	\$ 00,000	-
SAMAL ROUPETMENT (MATERIALS	TOTAL MAIO	PEQUIPMENT				<u>^</u>		<u> </u>		\$ -
S.11 Mas Witches - 3ph w/ motor operator 0 EA 5 40,000 5 - 5 15,000 5 - 5 5		-				\$ -		\$ -		\$ -
S.1a Line Switches - 3ph w/ manual operator 0 EA S 40,000 S - S 15,000 S - S S										
S.10 Disconnect Switches - 3ph w/ manual operator 0 EA \$ 35,000 \$ \$ \$ \$ \$ \$ \$ \$ \$						_				4
S.1c										
S.1d CTS 0 EA S 13,000 S - S 8,000 S - S S S S S S S S		• • • •				·				
S.1e CCVTS						7				
S.1f										
S.1g Wave Traps 0 EA S 13,000 S - S 8,000 S - S	5.1e	CCVT'S				\$ -		\$ -		
S.1h Station Service Transformers 0 EA \$ 200,000 \$ - \$ 50,000 \$ - \$ \$ 20	5.1f	Arresters	0	EA	\$ 6,500	\$ -	\$ 1,500	\$ -	\$ 8,000	\$ -
S.1	5.1g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
S.2 230kV	5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.2a Line Switches - 3ph w/ motor operator 0 EA \$ 35,000 \$ - \$ 5,000 \$ - \$ 5,2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 30,000 \$ - \$ 5,2c \$ 5,2c \$ 7,500 \$ - \$ 5,2c \$ 5,2c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$	5.1j		0	EA	\$ 15,000	\$ -	\$ 7,500	\$ -	\$ 22,500	\$ -
5.2a Line Switches - 3ph w/ motor operator 0 EA \$ 35,000 \$ - \$ 5,000 \$ - \$ 5,2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 30,000 \$ - \$ 5,2c \$ 5,2c \$ 7,500 \$ - \$ 5,2c \$ 5,2c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$										
5.2a Line Switches - 3ph w/ motor operator 0 EA \$ 35,000 \$ - \$ 5,000 \$ - \$ 5,2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 30,000 \$ - \$ 5,2c \$ 5,2c \$ 7,500 \$ - \$ 5,2c \$ 5,2c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$ 7,5c \$	5.2	230kV								
S.2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 30,000 \$ - \$ 17,500 \$ - \$ \$ 5.2c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ \$ \$ \$ \$ \$ \$			0	EA	\$ 35.000	\$ -	\$ 15.000	\$ -	\$ 50,000	\$ -
5.2c						т				
5.2d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.2e CCVT'S 0 EA \$ 10,000 \$ - \$ 6,000 \$ - \$ 5.2f Arresters 0 EA \$ 5,000 \$ - \$ 6,000 \$ - \$ 5.2g Wave Traps 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.2h Station Service Transformers 0 EA \$ 13,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
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5.2f Arresters 0 EA \$ 5,000 \$ - \$ 6,000 \$ - \$ 5.2g Wave Traps 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ \$ 5.2h Station Service Transformers 0 EA \$ - \$ - \$ 5.2h Station Service Transformers 0 EA \$ - \$ - \$ 5.2h Station Service Transformers 0 EA \$ - \$ - \$ 5 - \$ 5 5.2h Station Service Transformers 0 EA \$ - \$ - \$ 5 - \$ 5 5 5 5 5 5 5 5 5							,	•	, , , , , , , , , , , , , , , , , , , ,	
5.2g Wave Traps 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						•				
5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <							,	•		
5.2j 0 EA \$ - \$ - \$ - \$ \$ 5.3 115kV 5.3a Line Switches - 3ph w/ motor operator 0 EA \$ 33,000 \$ - \$ 15,000 \$ - \$ 5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 28,000 \$ - \$ 17,500 \$ - \$ 5.3c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.3e CCV'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$										
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5.3a Line Switches - 3ph w/ motor operator 0 EA \$ 33,000 \$ - \$ 15,000 \$ - \$ 5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 28,000 \$ - \$ 17,500 \$ - \$ 5.3c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$	5.2j		1 0	EA	> -	> -	> -	> -	\$ -	\$ -
5.3a Line Switches - 3ph w/ motor operator 0 EA \$ 33,000 \$ - \$ 15,000 \$ - \$ 5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 28,000 \$ - \$ 17,500 \$ - \$ 5.3c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$										
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5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$	5.3c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$	5.3d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$	5.3e	CCVT'S	0	EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$ -
<u>, </u>						<u> </u>				\$ -
5.3h Station Service Transformers 0 EA \$ - \$ - \$ - \$										\$ -
5.3 Fuses 0 EA \$ - \$ - \$ - \$						·				\$ -

			Unit of Measure	Mate	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
TOTAL - SMALL F	EQUIPTMENT / MATERIALS					\$ -		\$ -		\$ -
	OUSE / PANELS / GENERATOR					,		,		,
	CONTROL HOUSE	0	EA	\$	551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$ -
	Protection and Telecom Equipment Panels	0	EA	\$	35,000		\$ 10,000	\$ -	\$ 45,000	
	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
	Control Cable	0	LS	\$			\$ 23,000	\$ -	\$ 100,000	\$ -
$\overline{}$:		
	SCADA and Communications	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$ -
	Low Voltage AC Distribution	0	EA	\$	50,000		\$ 100,000	\$ -	\$ 150,000	\$ -
	DC Distribution System	0	EA	\$	50,000		\$ 100,000	\$ -	\$ 150,000	\$ -
	Security	0	EA	\$	7,500		\$ 7,500	\$ -	\$ 15,000	\$ -
6.9 F	Fire Alarm	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
6.10 G	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
TOTAL - CONTRO	OL HOUSE / PANELS / GENERATOR					\$ -		\$ -		\$ -
7. MISC ITEMS										
	Conduit & Cable Trench System	0	LF	Ś	185.00	\$ -	\$ 170.00	\$ -	\$ 355	\$ -
		0		T .		•				
7.2 R	Rigid Bus, Fittings & Insulators	1	LS	\$	15,008.40	\$ 15,008	\$ 56,904.00	\$ 56,904	\$ 71,912	\$ 71,912
7.3 S	Strain Bus, Connectors & Insulators	0	LF	\$	13.38	\$ -	\$ 39.35	\$ -	\$ 53	\$ -
7.4 G	Grounding System	0	LF	\$	6.93	\$ -	\$ 32.58	\$ -	\$ 40	\$ -
7.5 S	Strain Bus Insulators - 345kV	0	EA	Ś	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$ -
	Strain Bus Insulators - 230kV	0	EA	\$	1,400		\$ 750		\$ 2,150	
	Strain Bus Insulators - 115kV	0	EA	\$		\$ -	\$ 550	\$ -	\$ 1,550	
			LS	\$:		
	Low Voltage AC Station Service	0			50,000		,	\$ -	\$ 125,000	
	SSVT Service	0	LS	\$	45,000		\$ 45,000	\$ -	\$ 90,000	\$ -
	Control Cables	0	LS	\$	472,500		\$ 472,500	\$ -	\$ 945,000	\$ -
7.11 C	Control Conduits from Trench to Equipment	0	LS	\$	125,000		\$ 125,000	\$ -	\$ 250,000	\$ -
7.12 N	Misc. Materials (Above and Below Ground)	0	LS	\$	180,000	\$ -	\$ 180,000	\$ -	\$ 360,000	\$ -
7.13										l
7.14										
7.15										
7.16										
7.17										
7.18										
7.19										
7.19										
7.21				-						
7.22										
7.23										
7.24										
7.25										
TOTAL - MISC IT	TEMS					\$ 15,008		\$ 56,904		\$ 71,912
I Porter	Substation - Install					\$ 15,008		\$ 56,904		\$ 71,912
						15,000		- 30,304		, ,,,,,,
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization			1						
	Mob / Demob	1	LS	\$	-	\$ -	\$ 719	\$ 719	\$ 719	\$ 719
P	Project Management, Material Handling & Amenities									İ
8.2 P	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ -	\$ 2,733	\$ 2,733	\$ 2,733	\$ 2,733
			1.0	1		ć	¢ 7:-	A 7	A 7:-	
	Utility PM and Project Oversite	1		-			\$ 719			
	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 719	\$ 719	\$ 719	\$ 719
	Engineering									
	Design Engineering	1		\$			\$ 5,753			
	LiDAR	-	LS	\$			\$ 216		\$ 216	
8.7 G	Geotech	-	EA	\$			\$ 3,500		\$ 3,500	
	Supraving (Staking	1	Site	\$	-	\$ -	\$ 503	\$ 503	\$ 503	\$ 503
	Surveying/Staking	1	site	۲ ا	- 1	ا - ب	7 505	7 303	ا دارد	, , , , , ,
8.8 S	Testing & Commissioning	1	Site	,	-	,	y 303	y 505	3 303	303

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.13	Real Estate Costs (New)		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- 1
8.15	Legal Fees		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- 1
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 1,201	\$ 1,201	\$ -	\$ -	\$ 1,201	\$ 1,	1,201
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 72	\$ 72	\$ 72	\$	72
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,201		\$ 13,017		\$ 14,	4,217

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J. SS Porter-Install

NAT & NYPA - T026 - (Segment A, Base) K. Porter Substation - Removal

545,937

Total: \$

NAT & NYPA - T026	- (Segment A, Base	·)			
	5	БиррІу	Installation	Total	
K. Porter Substation - Removal					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -	
2. SUBSTATION FOUNDATIONS	\$	-	\$ 126,600	\$ 126,600	
3. SUBSTATION STRUCTURES	\$	-	\$ 206,100	\$ 206,100	
4. MAJOR EQUIPTMENT	\$	-	\$ 43,500	\$ 43,500	İ
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 59,500	\$ 59,500	
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$ -	
7. MISC ITEMS	\$	-	\$ 38,613	\$ 38,613	ĺ
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 71,625	\$ 71,625	
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -	0.0%
SUBTOTAL:	\$	-	\$ 545,937	\$ 545,937	ı
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -	0.0%
TOTAL:	\$	-	\$ 545,937	\$ 545,937	

Description of Work:

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
K. Porte	r Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
2.2a	Circuit Breaker Foundations	3	EA	\$ -	\$ -	\$ 7,200	\$ 21,600	\$ 7,200	\$ 21,600
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	\$ 55,000
2.2e	Switch Stand Foundations	5	EA	\$ -	\$ -	\$ 5,200	\$ 26,000	\$ 5,200	\$ 26,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -					\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -					\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	. ,		\$ 2,400	
2.2j	Instrument Transformer Stand Foundations	4		\$ -				\$ 2,400	
2.2k	Arrester Stand Foundations	6		\$ -	\$ -	\$ 2,400		\$ 2,400	
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -		·	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	•	\$ -	\$ -
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3	115kV		F.4		A	A	<u> </u>	A	A
2.3a	Circuit Breaker Foundations	0		\$ -					\$ -
2.3b	Capacitor Bank Foundations	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	·	\$ - \$ -	\$ - \$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0		'			·		
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0		\$ -	\$ -	\$ -	•	\$ -	\$ -
2.3e	Switch Stand Foundations	0		\$ -	\$ -	\$ 5,200			\$ -
2.3f	Fuse Stand Foundations	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	·	\$ -	\$ - \$ -
2.3g	Bus Support 3ph Foundations	0		\$ -		•	•	\$ -	
2.3h 2.3j	Bus Support 1 Ph Foundations	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -			\$ - \$ -
	Instrument Transformer Stand Foundations		EA		\$ - \$ -				•
2.3k 2.3m	Arrester Stand Foundations	0	EA EA	\$ - \$ -	\$ -	\$ - \$ -	•		\$ - \$ -
	Wave Trap Stand Foundations			·	\$ - \$ -			\$ - \$ -	•
2.3n	Station Service Foundations Misc. Structure Foundations	0	EA EA	7	\$ -	\$ - \$ -	т	\$ - \$ -	\$ - \$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	ş -	ş -	, -	ş -	, -
2.4	Transformer Foundations								
2.4 2.4a	Transformer Foundations 345-230kV Transformer Foundation w/ Oil Containment	0	ГА	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4a 2.4b	345-230kV Transformer Foundation W/ Oil Containment 345-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ - \$ -	т				\$ - \$ -
	230kV-115kV Transformer Foundation w/ Oil Containment		EA		\$ - \$ -				\$ - \$ -
2.4c 2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0		\$ - \$ -	\$ -	, , , , , , , , , , , , , , , , , , , ,		\$ 42,000 \$ -	\$ -
2.40	113KV-09KV Transformer Foundation W/ Oil Containment	0	EA	· -	- -	, -	\$ -	· -	· -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad (40'x125')	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	•	\$ -	\$ -
2.50	School Tourisation		271	,	Y	*	Ÿ	Ÿ	*
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -			\$ -	\$ -
2.6c									
		0	FA		\$ -		•	•	Ś -
		0	EA	\$ -	\$ -		-	\$ -	\$ -
TOTAL - SUBS	TATION FOUNDATIONS	0	EA		\$ -		\$ -	•	
	TATION FOUNDATIONS IN STRUCTURES	0	EA				•	•	\$ - \$ 126,600
	TATION FOUNDATIONS IN STRUCTURES 345kV	0	EA				\$ -	•	
3. SUBSTATIO	N STRUCTURES	0				\$ -	\$ - \$ 126,600	\$ -	
3. SUBSTATIO 3.1	N STRUCTURES 345kV			\$ -	\$ -	\$ -	\$ - \$ 126,600 \$ -	\$ -	\$ 126,600
3. SUBSTATIO 3.1 3.1a	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ -	\$ -	\$ 126,600 \$ -
3. SUBSTATIO 3.1 3.1a 3.1b	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0 0	EA EA EA	\$ - \$ - \$ -	\$ -	\$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ -
3.1 3.1a 3.1b 3.1c	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 0 0	EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ - \$ 126,600 \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ -
3.1 3.1a 3.1b 3.1c 3.1d	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 0 0	EA EA EA	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ -
3.1 3.1a 3.1b 3.1c 3.1d 3.1e	STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 0 0 0	EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1u 3.1a 3.1b 3.1c 3.1d 3.1d 3.1e 3.1f	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0 0 0	EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1u 3.1a 3.1b 3.1c 3.1d 3.1d 3.1e 3.1f 3.1g	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 0 0 0	EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3. SUBSTATIO 3.1 3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h	STRUCTURES 345KV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1 3.1a 3.1b 3.1c 3.1d 3.1d 3.1d 3.1d 3.1d 3.1d 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j	STRUCTURES 345KV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1 3.1a 3.1b 3.1c 3.1d 3.1d 3.1d 3.1d 3.1d 3.1d 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j	STRUCTURES 345KV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1 3.1a 3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1s 3.1h 3.1h 3.1j 3.1h 3.1j 3.1k	SUBSTRUCTURES 345KV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 126,600 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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A - D Capactore Banks	4.3	115kV								
S	4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
S.MAL COUPTMENT / MATERIALS S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW	4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
S.MAL COUPTMENT / MATERIALS S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW S.1 SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW SASW										
S-11 Mas Witches - 3gh w/ motor operator						\$ -		\$ 43,500		\$ 43,500
Sila Line Switches - 3gh w / motor operator										
S.1b Disconnect Switches - 3ph w/ manual operator D			0	ГА	ć	ċ	ć F.F00	ć	¢	\$ -
S.1c										
S.1d CTS 0 EA S S S S S S S S S								•		
S.1e CCVTS 0 EA S S S 2,500 S S 2,500 S S 5,500 S S 5,500 S S S S S S S S S										
S.1f Arresters							•	•		
Sign Station Service Transformers 0 EA S S S S S S S S S										
S.1	5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
S.2 230kV	5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
S.2a Line Switches - 3ph w/ motor operator 2 EA S - S - S 5,500 S 11,000 S 5,500 S 11	5.1j		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
S.2a Line Switches - 3ph w/ motor operator 2 EA S - S - S 5,500 S 11,000 S 5,500 S 11										
S.2b Disconnect Switches - 3ph w/ manual operator S				_						
S.2c										
5.2d CT'S 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ 5 - \$ 5 5 5 5 5 5 5 5 5										
5.2e CCVT'S 6 EA \$ - \$ 1,500 \$ 9,000 \$ 1,500 \$ 9 \$ 1,500 \$ 9,000 \$ 1,500 \$ 9 \$ 9,000 \$ 1,500 \$ 9,000 \$ 1,500 \$ 9 \$ 9,000 \$ 1,500 \$ 9,000 \$ 1,500 \$ 9,000 \$ 1,500 \$ 9,000 \$ 1,500 \$ 2,500 \$ 1,500 \$ 2,500 \$ 1,500 \$ 2,500 \$ 1,500 \$ 2,500 \$ 1,500 \$ 2,500 \$ 5 5 5 2,500 \$ 5 5 5 2,500 \$ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 <t< td=""><td></td><td></td><td></td><td></td><td></td><td>,</td><td></td><td></td><td></td><td></td></t<>						,				
5.2f Arresters 6 EA \$ - \$ 2,500 \$ 15,000 \$ 2,500 \$ 15,000 \$ 2,500 \$ 15,000 \$ 2,500 \$ 5,000 \$ 2,500 \$ 5,000 \$ 2,500 \$ 5,000 \$ 2,500 \$ 5,500 \$ 5,500 \$ 2,500 \$ 5,500 \$ 5,500 \$ 2,500 \$ 5,500 \$ 5,500 \$ 5,500 \$ 5,500 \$ 5,500 \$ 5,500 \$ 5 5 5 - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
5.2g Wave Traps 2 EA \$ - \$ 2,500 \$ 5,000 \$ 2,500 \$ 5 5 5 5 2,500 \$ 5,000 \$ 2,500 \$ 5 5 5 - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <										
5.2j 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>										
5.3 115kV Color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the color of the col								'		
5.3a Line Switches - 3ph w/ motor operator 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>										
5.3c VT'S 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<										
5.3d CT'S 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<										
5.3e CCVT'S 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
5.3f Arresters 0 EA \$ - \$ 1,500 \$ - \$ 1,500 \$ 5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ 5.3h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$										
5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -							•			
5.3h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$										
		'								
5.3j Fuses 0 EA \$ - \$ - \$ - \$										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	L EQUIPTMENT / MATERIALS				\$ -		\$ 59,500		\$ 59,500
	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0		\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	
6.2	PANELS	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Protection and Telecom Equipment	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS									
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	1	L.S.	\$ -	\$ -	\$ 18,937.50	\$ 18,938	\$ 18,938	
7.3	Strain Bus, Connectors & Insulators	1		\$ -	\$ -	\$ 19,675.00	\$ 19,675	\$ 19,675	\$ 19,675
7.4	Grounding System	0		\$ -	\$ -	\$ 42,000.00		\$ 42,000	
7.5				<u> </u>		,	•	2,500	•
7.6									
7.7									
7.8									
7.9									
7.10									
7.10									
7.12									
7.13 7.14									
7.15 TOTAL - MISC	TTTAKC				A		Å 20.542		A 20.542
TOTAL - IVIISC	ITEMS				\$ -		\$ 38,613		\$ 38,613
K. Porte	r Substation - Removal				\$ -		\$ 474,313		\$ 474,313
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
0.2	Project Management, Material Handling & Amenities	1.0		<u> </u>	*	,,,,,,	,,,,,	Ψ 1,7 1.5	4 1,7 1.5
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS		\$ -	\$ 18,027	\$ 18,027	\$ 18,027	\$ 18,027
0.2	and Cost Manager, SHEQ Staff, and Admin Staff)	1]	J 10,027	J 10,027	7 10,027	3 10,027
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
8.4	Site Accommodation, Facilities, Storage	1.0	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	
0.4	Engineering	1.0	LJ	-	, -	ÿ 4,743	7 4,743	7 4,743	7 4,743
8.5	Design Engineering	1.0	LS	\$ -	\$ -	\$ 37,945	\$ 37,945	\$ 37,945	\$ 37,945
				<u> </u>	Ψ				
8.6 8.7	LiDAR Geotech	-	Mile Site	\$ -	\$ -	\$ - \$ -	\$ - \$ -	т	\$ - \$ -
						7	т	т	
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 3,320	\$ -	\$ 3,320	\$ -
	Testing & Commissioning				1		1		
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 11,858	\$ -	\$ 11,858	\$ -
	Permitting and Additional Costs			ļ				,	
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 1,423		\$ 1,423	\$ 1,423
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14			LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-							
8.15 8.16	Legal Fees Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15 8.16 8.17		-			\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
8.15 8.16			LS LS LS	\$ -	\$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -
8.15 8.16 8.17 8.18 8.19	Allowance for Funds Used During Construction (AFUDC)	-	LS LS	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$ -

NAT & NYPA - T027 - (Segment A, Double Circuit)

L. Interconnection Edic Station

Estimate Revision: 5 Total: \$ 2,104,121

NAT & NYPA - T027 - (Se	gment A, Double	Circuit)				
		Supply		Installation		Total
L. Interconnection Edic Station						
1. CLEARING & ACCESS	\$	-	\$	367,850	\$	367,850
2. FOUNDATIONS	\$	168,366	\$	170,169	\$	338,536
3. STRUCTURES	\$	501,469	\$	321,821	\$	823,289
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-
5. INSULATORS, FITTINGS, HARDWARE	\$	160,000	\$	94,400	\$	254,400
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	66,387	\$	253,659	\$	320,046
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	896,222	\$	1,207,899	\$	2,104,121
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL	Ś	896 222	Ġ	1 207 899	Ś	2 104 121

	of Wo	

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	
L. Interc	onnection Edic Station										
1. CLEARING 8	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	,	· .	10,000
1.3	Access Road	-	LF	\$		\$ -	\$ 45		\$ 45		-
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4			\$	14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$		\$ -	\$ 70				245,000
1.6	Matting - To Work Area	300.0	LF	\$		\$ -	\$ 70				21,000
1.7	Snow Removal	-	LS	\$		\$ -			\$ 516,800		-
1.8	ROW Restoration	0.5	Mile	\$		\$ -	\$ 10,000				5,000
1.9	Work Pads	20,000.0	SF	\$		\$ -	\$ 4			\$	70,400
1.10	Restoration for Work Pad areas	4,000.0	SF	\$		\$ -	\$ 0.2			\$	600
1.11	Temporary Access Bridge	-	EA	\$		\$ -	\$ 20,035	\$ -	\$ 20,035		-
1.12	Air Bridge	-	EA	\$		\$ -	\$ 14,445	\$ -	\$ 14,445		-
1.13	Stabilized Construction Entrance	-	EA	\$		\$ -	\$ 4,580	\$ -	\$ 4,580		-
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$		\$ -	\$ 4,130		\$ 4,130		-
1.15	Gates	-	EA	\$		\$ -	\$ 2,500	\$ -	\$ 4,500		-
1.16	Culverts / Misc. Access	-	EA	\$	750		\$ 1,250		\$ 2,000		-
1.17	Concrete Washout Station	1	EA	\$		\$ -	\$ 1,850	\$ 1,850	\$ 1,850	<u> </u>	1,850
1.18						\$ -		\$ -		\$	-
1.19						\$ -		\$ -		\$	-
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$	-
TOTAL - CLEA	RING & ACCESS					\$ -		\$ 367,850		\$	367,850
2. FOUNDATIO											
2.1	Foundation – Drilled Pier – 8'X 27'	3	EA	\$	41,332						249,317
2.2	Foundation – Drilled Pier – 8'X 29'	1	EA	\$	44,372	\$ 44,372	\$ 44,847	\$ 44,847	\$ 89,219	\$	89,219
2.3	Rock Excavation Adder	-	CY	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$	-
2.4											
2.5											
2.6											
2.7											
2.8											
2.9											
2.10											
2.11											

						Labor & Equipment	Labor & Equipment		
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate	TOTAL
2.12									
2.13									
2.14									
2.15 TOTAL - FOUN	DATIONS				\$ 168,366		\$ 170,169		\$ 338,536
3. STRUCTURE					\$ 108,300		\$ 170,169		\$ 336,330
3.1	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) – 105'	3	Structure	\$ 98,883	3 \$ 296,648	\$ 59,330	\$ 177,989	\$ 158,212	\$ 474,636
3.2	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$ 202,79					
3.3	Install Grounding and Grounding Accessories	4	Pole		5 \$ 2,024		\$ 22,154	\$ 6,045	\$ 24,178
3.4					\$ -		\$ -		\$ -
3.5									
3.6					\$ -		\$ - \$ -		\$ - \$ -
3.7					\$ - \$ -		+'		+'
3.8					\$ -		\$ -		\$ - \$ -
3.10					\$ -		\$ -	1	\$ -
3.11					\$ -		\$ -		\$ -
3.12					\$ -		\$ -		\$ -
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		s -		\$ -
TOTAL - STRU	THES				\$ 501,469		\$ 321,821		\$ 823,289
	R, SHIELDWIRE, OPGW				3 301,403		3 321,821		3 623,269
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.9) \$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF		5 \$ -	\$ 5.00		\$ 6.35	\$ -
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ 0.4	7 \$ -	\$ 5.00	\$ -	\$ 5.47	\$ -
4.5	Remove Existing Cable From Existing Structures	-	Mile		\$ -	\$ 30,000	\$ -	\$ 30,000.00	
4.6	Remove Existing OPGW Cable	-	Mile	\$ -		\$ 12,000	\$ -	\$ 12,000.00	
4.7	Remove Existing EH7	-	Mile	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$ -
4.8		-							
4.10	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$ 1,75		\$ 3,500		\$ 5,250.00	
	UCTOR, SHIELDWIRE, OPGW:				\$ -		\$ -		\$ -
	, FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)								
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)			4 4 000	400,000	4 720	42.200	4 2.520	4 454 000
5.3 5.4	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	60	Assembly	\$ 1,800	\$ 108,000	\$ 720	\$ 43,200	\$ 2,520	\$ 151,200
5.5	OPGW Assembly - Tangent	-	Assembly	\$ 200) \$ -	\$ 150	\$ -	\$ 350	\$ -
5.6	OPGW Assembly - Angle / DE	4	Assembly) \$ 1,000				
5.7	OHSW Assembly - Angle / DE	4	Assembly) \$ 1,000				
5.8	OPGW Splice Boxes	-	Set	\$ 1,746		\$ 2,274		\$ 4,020	
5.9	OPGW Splice & Test	-	EA	\$ 2,520		\$ 2,520		\$ 5,040	
5.10	Spacer - Conductor	-	EA) \$ -	\$ 35 \$ 35		\$ 85	
5.11	Vibration Dampers - Conductor	-	EA .		5 \$ -				\$ -
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$ 2	7 \$ -	\$ 35	\$ -	\$ 62	\$ -
5.13	Guys, Anchors, and Accessories	-	EA	\$ 720) \$ -	\$ 885	\$ -	\$ 1,605	\$ -
5.14	Misc. materials (Signs and Markers)	-	Mile	\$ 770) \$ -	\$ 1,006	\$ -	\$ 1,776	\$ -
5.15									
5.16									
5.17									
5.18 5.19	Interconnection Arrangements	1	EA	\$ 50,000	50,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 100,000
5.19	interconnection Arrangements	+ +	EA	50,000	50,000 بر ر	50,000 ب	50,000 ب	, 100,000	2 100,000
	L ATOR, FITTINGS, HARDWARE				\$ 160,000		\$ 94,400		\$ 254,400
	onnection Edic Station				\$ 829,835		\$ 954,240		\$ 1,784,075
					9 023,833		9 934,240		1,704,073
6. MOB/DEM	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
0.1	Project Management, Material Handling & Amenities	1	LJ		-	7 17,041	7 17,041	7 17,041	7 17,841
	1J	1		-	+	1		1	1

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Su	pply Rate	Material Supp	oly Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS					\$ 67,808	\$ 67,808	\$ 67,808	\$ 67,808
6.3	Utility PM and Project Oversite	1	LS			\$	-	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$	-	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$	-	\$ 89,204	\$ 89,204	\$ 89,204	\$ 89,204
6.6	LiDAR	-	LS	\$	-	\$	-	\$ 5,352	\$ -	\$ 5,352	\$ -
6.7	Geotech	1	Location	\$	-	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$	-	\$ 12,489	\$ 12,489	\$ 12,489	\$ 12,489
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$	-	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 5,352	\$ 5,352	\$ 5,352	\$ 5,352
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$	66,387	\$	66,387	\$ -	\$ -	\$ 66,387	\$ 66,387
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 1,784	\$ 1,784	\$ 1,784	\$ 1,784
TOTAL - MOB	B/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	66,387		\$ 253,659		\$ 320,046

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NAT & NYPA - T026 - (Segment A, Base) M. Interconnection New Scotland Station

5		Total:	\$ 3,075,099		
NAT & NYPA - T026 - (Segment A, Ba	se)			
		Supply	Installation		Total
M. Interconnection New Scotland Station					
1. CLEARING & ACCESS	\$	-	\$ 367,850	\$	367,850
2. FOUNDATIONS	\$	365,657	\$ 473,093	\$	838,749
3. STRUCTURES	\$	655,465	\$ 445,628	\$	1,101,092
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,555	\$ 26,100	\$	29,655
5. INSULATORS, FITTINGS, HARDWARE	\$	161,130	\$ 95,795	\$	256,925
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	94,864	\$ 385,963	\$	480,828
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	\$	-
SUBTOTAL:	\$	1,280,670	\$ 1,794,428	\$	3,075,099
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	Ś	1.280.670	\$ 1.794.428	Ś	3.075.099

	TOTAL:	\$ 1,280,670	\$ 1,794,428	\$ 3,075,099					
Description	of Work:								
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	connection New Scotland Station								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$ -	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	300.0	LF	\$ -	\$ -	\$ 70	\$ 21,000	\$ 70	\$ 21,000
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	20,000.0	SF	\$ -	\$ -	\$ 4	\$ 70,400	\$ 4	\$ 70,400
1.10	Restoration for Work Pad areas	4,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 600	\$ 0	\$ 600
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEA	RING & ACCESS				\$ -		\$ 367,850		\$ 367,850
2. FOUNDATION	DNS								
2.1	Foundation – Drilled Pier – 8'X 50'	3	EA	\$ 76,500	\$ 229,501	\$ 77,320	\$ 231,959	\$ 153,820	\$ 461,459
2.2	Foundation – Drilled Pier – 8'X 89'	1	EA	\$ 136,156	\$ 136,156	\$ 137,614	\$ 137,614	\$ 273,770	\$ 273,770
2.3	Rock Excavation Adder	51.8	СУ	\$ -	\$ -	\$ 2,000	\$ 103,520	\$ 2,000	\$ 103,520
2.4									
2.5									
2.6									
2.7									
2.8									
2.9									
2.10									<u> </u>
2.11				1	1		l		1

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Estimate

Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	l Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.12											
2.13											
2.14											
2.15 TOTAL - FOUN	IDATIONS					\$ 365,657		\$ 473,093		Ś	838,749
3. STRUCTURE						\$ 303,037		\$ 475,095		\$	636,749
3.1	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	3	Structure	\$	178,026	\$ 534,077	\$ 106,815	\$ 320,446	\$ 284,841	\$	854,522
3.2	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$	116,328	\$ 116,328	\$ 69,797	\$ 69,797	\$ 186,125	\$	186,125
3.3	Install Grounding and Grounding Accessories	10	Pole	\$	506		\$ 5,539	\$ 55,385	\$ 6,045	\$	60,445
3.4						\$ -		\$ -			
3.5						\$ -		\$ -			
3.7						\$ -		\$ -			
3.8						\$ -		\$ -			
3.9						\$ -		\$ -			
3.10						\$ -		\$ -			
3.11						\$ -		\$ -			
3.12				1		\$ -		\$ -			
3.13 3.14				+		\$ - \$ -		\$ - \$ -			
3.14						\$ -		\$ -			
TOTAL - STRU	L CTURES					\$ 655,465		\$ 445,628		Ś	1,101,092
4. CONDUCTO	DR, SHIELDWIRE, OPGW					,,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			, , , , ,
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	1,500	LF	\$	1.90		\$ 5.00	\$ 7,500			10,350
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35		\$ 5.00	_	\$ 6.35		
4.3	(1) 3/8" EHS7 Steel	1,500	LF	\$	0.47				\$ 5.47		8,205
4.5	Remove Existing 345kV Cable From Existing Structures	0.3	Mile	\$	-	\$ -	\$ 30,000		\$ 30,000.00		7,500
4.6	Remove Existing OPGW Cable Remove Existing EH7	- 0.3	Mile Mile	\$	-	\$ - \$ -	\$ 12,000 \$ 12,000	\$ - \$ 3,600	\$ 12,000.00 \$ 12,000.00		3,600
4.7	Remove existing Em/	0.5	IVIIIE	3		· -	\$ 12,000	3,000	3 12,000.00	,	3,000
4.9											
4.10	Rider Poles - Relocated	-	Set	\$	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$	-
4.11	Rider Poles	-	EA	\$	1,750		\$ 3,500		\$ 5,250.00		-
	UCTOR, SHIELDWIRE, OPGW:					\$ 3,555		\$ 26,100		\$	29,655
	I, FITTINGS, HARDWARE		A	ć	4.000	<u> </u>	ć 720	ć	\$ 2.520	6	
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly) 115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly Assembly	\$	1,800 900	\$ - \$ -	\$ 720 \$ 560		\$ 2,520 \$ 1,460		
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$		\$ 108,000			\$ 2,520		151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$		\$ -	\$ 725		\$ 1,625		-
5.5	OPGW Assembly - Tangent	-	Assembly	\$	200	\$ -	\$ 150		\$ 350		-
5.6	OPGW Assembly - Angle / DE	-	Assembly	\$	250		\$ 150		\$ 400		
5.7	OHSW Assembly - Angle / DE	4	Assembly	\$	250				\$ 400		1,600
5.8	OPGW Splice Boxes	-	Set	\$	1,746		\$ 2,274		\$ 4,020		-
5.9 5.10	OPGW Splice & Test Spacer - Conductor	9	EA EA	\$	2,520 50	T	\$ 2,520 \$ 35		\$ 5,040 \$ 85		765
5.11	Vibration Dampers - Conductor	48	EA	Ś	35						3,360
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$		\$ -	\$ 35		\$ 62	\$	-
									•	<u> </u>	
5.13	Guys, Anchors, and Accessories	-	EA	\$	720		\$ 885		\$ 1,605		-
5.14	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776		-
5.15	Interconnection Arrangements		F.4	1	F0 000	\$ -	\$ 50,000	5 -	\$ 100,000	\$	100,000
5.16 5.17	Interconnection Arrangements	1	EA	\$	50,000	\$ 50,000 \$ -	ş 50,000	\$ 50,000	\$ 100,000	\$	100,000
5.17				+		\$ -		\$ -		\$	
5.19						\$ -		\$ -		\$	
5.20						\$ -		\$ -		\$	
TOTAL - INSUL	LATOR, FITTINGS, HARDWARE					\$ 161,130		\$ 95,795		\$	256,925
M. Inter	connection New Scotland Station					\$ 1,185,806		\$ 1,408,465		\$	2,594,271
	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$	25,943

Item	item Description	Estimated Quantity	Unit of Measure	Material Supp	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 98,602	\$ 98,602	\$ 98,602	\$ 98,602
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 129,714	\$ 129,714	\$ 129,714	\$ 129,714
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.7	Geotech	1	Location	\$	-	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 18,160	\$ 18,160	\$ 18,160	\$ 18,160
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$	94,864	\$ 94,864		\$ -	\$ 94,864	\$ 94,864
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 2,594		\$ 2,594	\$ 2,594
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 94,864		\$ 385,963		\$ 480,828

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NAT & NYPA - T026 - (Segment A, Base)

N. Interconnection Rotterdam Station

Estimate Revision: 5 Total: \$ 4,561,342

NAT & NYPA - T026 - (Segmen	t A, Ba	se)			
		Supply	Installation		Total
N. Interconnection Rotterdam Station					
1. CLEARING & ACCESS	\$	-	\$ 1,233,050	\$	1,233,050
2. FOUNDATIONS	\$	192,145	\$ 325,963	\$	518,108
3. STRUCTURES	\$	546,722	\$ 837,150	\$	1,383,872
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	65,923	\$ 437,250	\$	503,173
5. INSULATORS, FITTINGS, HARDWARE	\$	165,730	\$ 118,480	\$	284,210
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	77,642	\$ 561,288	\$	638,929
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	1,048,161	\$ 3,513,181	\$	4,561,342
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	\$	1,048,161	\$ 3,513,181		4,561,342

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Interd	connection Rotterdam Station								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	7.0	Acre	\$ -	\$ -	\$ 15,000	\$ 105,000	\$ 15,000	\$ 105,000
1.2	Clearing the ROW - Light (mowing)	5.0	Acre	\$ -	\$ -	\$ 5,000	\$ 25,000	\$ 5,000	\$ 25,000
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	4,800.0	LF	\$ -	\$ -	\$ 4			\$ 19,200
1.5	Matting - Access and ROW	4,800.0	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	2,400.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800		\$ 516,800	
1.8	ROW Restoration	1.0	Mile	\$ -	\$ -	\$ 10,000	\$ 10,000		\$ 10,000
1.9	Work Pads	160,000.0	SF	\$ -	\$ -	\$ 4			\$ 563,200
1.10	Restoration for Work Pad areas	32,000.0	SF	\$ -	\$ -	\$ 0.2	. , , , , , , , , , , , , , , , , , , ,		\$ 4,800
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130		\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750		\$ 1,250		\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEAR	RING & ACCESS				\$ -		\$ 1,233,050		\$ 1,233,050
2. FOUNDATIO	DNS								
2.1	10' ED Rock BF	6	EA	\$ 358	\$ 2,145	\$ 3,575	\$ 21,450	\$ 3,933	\$ 23,595
2.2	15' ED Rock BF	18	EA	\$ 536	\$ 9,653	\$ 5,363	\$ 96,525	\$ 5,899	\$ 106,178
2.3	20' ED Rock BF	4	EA	\$ 715	\$ 2,860	\$ 7,150	\$ 28,600	\$ 7,865	\$ 31,460
2.4	Foundation – Drilled Pier – 8'X 29'	4	EA	\$ 44,372	\$ 177,487	\$ 44,847	\$ 179,388	\$ 89,219	\$ 356,875
2.5	Rock Excavation Adder	-	СУ	\$ -	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ -		\$ -
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply C	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.13					\$		\$ -		\$ -
2.14					+'		\$ -		\$ -
2.15					· ·		\$ -		\$ -
TOTAL - FOUN 3. STRUCTURE					\$ 192,	.45	\$ 325,963		\$ 518,108
3.1	15kV 3-CKT TANGENT DIST WOOD POLE	3	Pole	\$ 3,500	\$ 10	3,600	\$ 10,800	\$ 7,100	\$ 21,300
3.2	15Kv 3-CKT MA DIST WOOD POLE	1	Pole	\$ 3,500		00 \$ 3,600			\$ 7,100
3.3	15kV 3-CKT DE - WOOD POLE	2	Pole	\$ 3,500) \$ 7,	00 \$ 3,600	\$ 7,200	\$ 7,100	\$ 14,200
3.4	115kV 1-CKT TANGENT - WOOD POLE	5	Pole	\$ 4,500					\$ 44,500
3.5	115kV 1-CKT MA - WOOD POLE	2	Pole	\$ 4,500		00 \$ 4,400			\$ 17,800
3.6	115kV 1-CKT DE - WOOD POLE	11	Pole	\$ 5,500		5,000			\$ 115,500
3.7	115kV 2-CKT TANGENT - WOOD POLE 115kV 2-CKT DE - STEEL POLE	4	Pole Pole	\$ 5,500 \$ 98,883					\$ 42,000 \$ 632,848
3.9	Remove Existing Structure and Accessories	24	EA	3 90,003		\$ 12,300			\$ 295,200
3.10	Incline Existing Structure and Accessories	24	LA		+ 7	. 12,300	\$ 233,200		\$ 255,200
3.11					\$		\$ -		\$ -
3.12	Install Grounding and Grounding Accessories	32	Pole	\$ 506	\$ 16,	.92 \$ 5,539	\$ 177,232	\$ 6,045	\$ 193,424
3.13		32	. 5.0	. 300					\$ -
3.13					+:		\$ - \$ -		\$ -
3.15					Ś		\$ - \$ -		\$ - \$ -
TOTAL - STRU	CTURES				\$ 546,	222	\$ 837,150		\$ 1,383,872
4. CONDUCTO	R, SHIELDWIRE, OPGW								
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	23,400	LF	\$ 1.90					\$ 161,460
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35		9 5.00			\$ -
4.3	(1) 3/8" EHS7 Steel	7,800	LF	\$ 0.4		5.00			\$ 42,666
4.5	Remove Existing Cable Remove Existing EH7	6.6	Mile Mile	\$ - \$ -	+'	\$ 30,000			\$ 197,700 \$ 26,400
4.6	15kV - (1) 477kcmil 26/7 ACSR "Hawk"	9,630	LF	\$ 1.67	т	Ţ 12,000			\$ 63,751
4.8	15kV - (1) 336kcmil 26/7 ACSR "lawk"	1,800	LF	\$ 1.22		96 \$ 5.00			\$ 11,196
4.9	2500 (2) 55000mm 25/7 Floor Emmee	-		7 2.2.	-/	3.00	7 0,000	*	
4.10	Rider Poles - Relocated	-	Set	\$ -	\$	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$ 1,750		\$ 3,500			\$ -
	JCTOR, SHIELDWIRE, OPGW:				\$ 65,	123	\$ 437,250		\$ 503,173
	FITTINGS, HARDWARE	33	Assambly	\$ 1,000) ¢ 22	00 \$ 560	\$ 18,480	\$ 1,560	\$ 51,480
5.1	115kV Tangent (1-Group of 9-Bells Each Assembly) 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	66	Assembly Assembly	\$ 1,000					\$ 102,960
5.3	15kV Tangent	12	Assembly	\$ 1,000		00 \$ 75			\$ 2,100
5.4	15kV Dead-end & Angle Insulators	18	Assembly	\$ 100			\$ 1,350		\$ 3,150
5.5	Neutral, Distribution, Tangent	4	Assembly	\$ 100	\$		\$ 300	\$ 175	\$ 700
5.6	Neutral, Distribution, DE/Side	2	Assembly	\$ 100			\$ 150		\$ 350
5.7	Jumper, DE/Angle, 3PH	4	Assembly	\$ 100		00 \$ 75			\$ 700
5.8	OPGW Assembly - Tangent	2	Assembly	\$ 200		00 \$ 150			\$ 700 \$ 4,400
5.9	OSHW Assembly - Tangent	11	Assembly	\$ 250		50 \$ 150			
5.10	OHSW Assembly - Angle / DE	38	Assembly	\$ 250	+	500 \$ 150			\$ 15,200
5.11	OPGW Splice Boxes	-	Set	\$ 1,746		\$ 2,274		, , , ,	\$ -
5.12	OPGW Splice & Test	-	EA	\$ 2,520		\$ 2,520		\$ 5,040	\$ -
5.13	Spacer - Conductor	-	EA	\$ 50		\$ 35			\$ -
5.14	Vibration Dampers - Conductor Shieldwire / ORGW Dampers Mice Fittings	-	EA EA	\$ 35		\$ 35		-	\$ - \$ -
5.15 5.16	Shieldwire / OPGW Dampers, Misc. Fittings Guys, Anchors, and Accessories	14.0	EA EA	\$ 27			1 7		\$ - \$ 22,470
5.17	Misc. materials (Signs and Markers)	-	Mile	\$ 770		\$ 1,006			\$ -
5.18	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s			1	\$. 1,000	\$ -	. 2,,,,,	\$ -
5.19	Interconnection Arrangements	8	EA	\$ 5,000		00 \$ 5,000			\$ 80,000
5.20							\$ -		\$ -
5.21					+'		\$ -		\$ -
5.22 5.23					+:		\$ - \$ -		\$ - \$ -
	LATOR, FITTINGS, HARDWARE				\$ 165,		\$ 118,480		\$ 284,210
	connection Rotterdam Station				\$ 970,		\$ 2,951,893		\$ 3,922,412
					370,	17	2,551,893		5,322,412
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								Page 55 of 63

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 149,081	\$ 149,081	\$ 149,081	\$ 149,081
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
6.4	Site Accommodation, Facilities, Storage	1	LS	\$.	-	\$ -	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 196,121	\$ 196,121	\$ 196,121	\$ 196,121
6.6	Lidar	1	LS	\$	-	\$ -	\$ 11,767	\$ 11,767	\$ 11,767	\$ 11,767
6.7	Geotech	1	Location	\$	-	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 27,457	\$ 27,457	\$ 27,457	\$ 27,457
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 11,767	\$ 11,767	\$ 11,767	\$ 11,767
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ - 1
6.18	Sales Tax on Materials	1	LS	\$ 77,6	542	\$ 77,642	\$ -	\$ -	\$ 77,642	\$ 77,642
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 3,922	\$ 3,922	\$ 3,922	\$ 3,922
TOTAL - MOE	D/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 77,642		\$ 561,288		\$ 638,929

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NAT & NYPA - T026 - (Segment A, Base)

System Upgrade Facilities (Various Stations for Edic/Marcy to New Scotland)

Estimate Revision: 19-4 Total: \$ 6,899,000

SYSTEM UPG	RADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF SS1	Marcy 345kV Bay 3300 - Reconductor Strain Bus UNS-18 Marcy-New Scotland Line	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 664,560	\$ 665,000
SUF SS1	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 30,000
SUF SS1	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 174,000
SUF SS1	SUF SS1 - TOTAL:				\$ -		\$ -		\$ 869,000
SUF SS2	Marcy 345kV Bay 3100 - Reconductor Strain Bus, Replace (3) breakers and wave trap UE1-7- Marcy-Edic Line	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 2,946,086	\$ 2,947,000
SUF SS2	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 120,720	\$ 121,000
SUF SS2	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 767,000
SUF SS2	SUFSS 2 - TOTAL:				\$ -		\$ -		\$ 3,835,000
SUF SS3	Edic 345kV Bay - UE1-7- Marcy-Edic Line Replace (2) breakers and wave trap	1	LS					\$ 1,661,294	\$ 1,662,000
SUF SS3	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 93,120	\$ 94,000
SUF SS3	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 439,000
SUF SS3	SUF SS3 - TOTAL:				\$ -		\$ -		\$ 2,195,000
SUF SS4		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS4	Removals		LS %					\$ -	\$ -
SUF SS4	Engineering, T&C, PM, Indirects (25%)		LS %						\$ -
SUF SS4	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
SUF SS5		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS5	Removals		LS %					\$ -	\$ -
SUF SS5	Engineering, T&C, PM, Indirects (25%)		LS %						\$ -
SUF SS5	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
	STATIONS SUF DIRECT TOTAL:								\$ 5,519,000
	STATIONS SUF INDIRECT TOTAL:								\$ 1,380,000
	STATIONS SUF TOTAL								\$ 6.899.000

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NAT & NYPA - T027 - (Segment A, Double Circuit)

Q. Princetown Substation GIS - Install

Estimate Revision: 5 Total: \$ 37,290,171

NAT & NYPA - T027 - (Segment	A, Doub	le Circuit)		
		Supply	Installation	Total
Q. Princetown Substation GIS - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	176,795	\$ 963,025	\$ 1,139,820
2. SUBSTATION FOUNDATIONS	\$	1,377,110	\$ 1,474,680	\$ 2,851,790
3. SUBSTATION STRUCTURES	\$	381,100	\$ 381,100	\$ 762,200
4. MAJOR EQUIPTMENT	\$	12,700,000	\$ 4,266,670	\$ 16,966,670
5. SMALL EQUIPTMENT / MATERIALS	\$	1,319,000	\$ 590,000	\$ 1,909,000
6. CONTROL HOUSE / PANELS	\$	3,727,920	\$ 1,422,920	\$ 5,150,840
7. MISC ITEMS	\$	358,177	\$ 733,260	\$ 1,091,437
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,603,208	\$ 5,815,206	\$ 7,418,414
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	21,643,310	\$ 15,646,861	\$ 37,290,171
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	21,643,310	\$ 15,646,861	\$ 37,290,171

Item	ltem Description	Estimated Quantity	Unit of Measure	Material S	upply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
Q. Prince	etown Substation GIS - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	3.3	ACRES	\$	-	\$ -	\$ 203,000	\$ 659,750	\$ 203,000	\$ 659,750
1.2	Station stone within substation fence.	1,385	CY	\$	27	\$ 37,395	\$ 75	\$ 103,875	\$ 102	\$ 141,270
1.3	Substation Fence	1,310	LF	\$	100	\$ 131,000	\$ 100	\$ 131,000	\$ 200	\$ 262,000
1.4										
1.5										
1.6	Permanent Access Road - 20'-Wide (From Gordon RD)	240	LF	\$	35	\$ 8,400	\$ 285	\$ 68,400	\$ 320	\$ 76,800
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15	DEED CONTROL SERVICE CONTROL					475705		d 052.025		4 420 000
	PREP/ GRADING/ FENCING / CIVIL					\$ 176,795		\$ 963,025		\$ 1,139,820
2.50851A110	N FOUNDATIONS 345kV									
2.1a	Circuit Breaker Foundations	0	EA	Ś	14,940	\$ -	\$ 16,000	\$ -	\$ 30,940	\$ -
2.1b	Capacitor Bank Foundations	0	EA	Ś	56,025	\$ -	\$ 60,000		\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	Ś	26,145	\$ -	\$ 28,000		\$ 54.145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	16	EA	\$	26,145	\$ 418,320			\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	Ś	4,482		\$ 4,800		\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	1	EA	Ś	2,988	\$ 2,988			\$ 6,188	
2.1g	Bus Support 3ph Foundations	0	EA	Ś	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	Ś	4.482	\$ -	\$ 4.800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800		\$ 9,282	
2.1m	Wave Trap Stand Foundations	6	EA	\$	4,482	\$ 26,892			\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	7/		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0		\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735			\$ -	\$ 7,735	
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735 \$ 3,735	\$ - \$ -		\$ -	\$ 7,735	
2.2m 2.2n	Wave Trap Stand Foundations Misc. Structure Foundations	0	EA EA	\$ 3,735 \$ -	\$ - \$ -	, , , , , , ,	\$ - \$ -	\$ 7,735 \$ -	\$ - \$ -
2.2n	Misc. Structure Foundations		LA	-	, -	, -	· -	ş -	-
2.2ρ				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3	115kV			ų.	Ţ	Ţ.	<u> </u>	Ť	*
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -		\$ -	\$ 69,615	
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	,	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -		\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations		E4	Ć 07.110	ć	ć 104.000	^	\$ 201.110	^
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	•		\$ -		<u> </u>
2.4b 2.4c	345-115kV Transformer Foundation w/ Oil Containment 230kV-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ 74,700 \$ -	\$ - \$ -		\$ - \$ -	\$ 154,700 \$ -	
2.4c	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -		\$ -	\$ -	\$ - \$ -
2.4u	113KV-09KV Transformer Foundation w/ Oil Containment		LA	-	· -	, -	· -	ş -	•
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 912,910	\$ 912,910	\$ 977,680	\$ 977,680	\$ 1,890,590	\$ 1,890,590
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000		\$ 17,000	\$ 33,000	
					,	,		,	· · · · · · · · · · · · · · · · · · ·
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
	70 Lightning Wast Foundation		L^		'	,		, ,,,,,,	·
2.6b				\$ -	\$ -		\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ 1,377,110		\$ 1,474,680		\$ 2,851,790
	ON STRUCTURES 345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	6		\$ 37,000	\$ 222,000		\$ 222,000	\$ 74,000	
3.1c	Switch Stands	0	EA	\$ 37,000	\$ 222,000		\$ 222,000		\$ 444,000
3.1d	Station Service Transformer Stand	1	EA	\$ 14,800	\$ 14,800			\$ 29,600	
3.1e	Bus Support 3ph	0	EA	\$ -	\$ 14,000		\$ -	\$ 25,000	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -		\$ -		\$ -
3.1g	Instrument Transformer Stand	36	EA	\$ 1,850	\$ 66,600	,	\$ 66,600	\$ 3,700	
3.1h	Arrester Stand	18	EA	\$ 1,850	\$ 33,300		\$ 33,300	\$ 3,700	
3.1j	Wave Trap Stand	6	EA	\$ 7,400	\$ 44,400		\$ 44,400	\$ 14,800	
3.1k	Lightning Masts	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0		\$ 33,300		\$ 33,300		\$ 66,600	
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -	\$ 33,300		\$ 66,600	
3.2c	Switch Stands	0		\$ 12,025		\$ 12,025		\$ 24,050	
3.2d	Station Service Transformer Stand	0		\$ 12,025		\$ 12,025		\$ 24,050	
3.2e	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
3.2f	Bus Support 1 Ph	0		\$ 2,775		\$ 2,775		\$ 5,550	
3.2g	Instrument Transformer Stand	0		\$ 1,295		\$ 1,295		\$ 2,590	
3.2h	Arrester Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2j	Wave Trap Stand	0	EA	\$ 5,550	\$ -		\$ -	\$ 11,100	
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -		\$ -	\$ 37,000	
3.3c	Switch Stands	0		\$ 7,955	\$ -	\$ 7,955		\$ 15,910	
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,330		\$ 3,330		\$ 6,660	
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850		\$ 3,700	
3.3g	Instrument Transformer Stand	0		\$ 740		\$ 740		\$ 1,480	•
3.3h 3.3j	Arrester Stand Wave Trap Stand	0	EA EA	\$ 740 \$ 3,700	\$ - \$ -	\$ 740 \$ 3,700	\$ - \$ -	\$ 1,480 \$ 7,400	
3.3k	Misc. Structures	0	EA	\$ 6,475		\$ 6,475		\$ 12,950	
3.5K	Misc. Structures		LA .	9 0,473	7	3 0,473	Ÿ	7 12,550	*
TOTAL - SUBS	TATION STRUCTURES				\$ 381,100		\$ 381,100		\$ 762,200
4. MAJOR EQ									
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ 220,000	\$ -		\$ -	\$ 300,000	
4.1b	Capacitor Banks	0	EA EA	\$ -	\$ - \$ -		\$ -	\$ 80,000	•
4.1c 4.1d	345 kV - 230 kV Auto Transformer 345 kV - 115 kV Auto Transformer	0	EA EA	\$ 3,300,000 \$ 3,300,000	\$ - \$ -		\$ - \$ -	\$ 4,050,000 \$ 4,050,000	
4.1u	345 kV (3) Bay Breaker-and-a-half GIS system	1	EA	\$ 12,700,000	7	,			
4.2	230kV		271	\$ 12,700,000	Ţ 12), 00,000	1,200,070	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ψ 10,500,670	20,500,010
4.2a	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV					·			
4.3a	Circuit Breakers	0		\$ 52,000	\$ -		\$ -	\$ 112,000	
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAJO	DR EQUIPTMENT				\$ 12,700,000		\$ 4,266,670		\$ 16,966,670
	IIPTMENT / MATERIALS				\$ 12,700,000		4,200,070		\$ 10,500,070
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	6	EA	\$ 40,000	\$ 240,000	\$ 17,500	\$ 105,000	\$ 57,500	\$ 345,000
5.1b	Disconnect Switches - 3ph w/ manual operator	0		\$ 35,000	\$ -	\$ 15,000		\$ 50,000	•
5.1c	VT'S	18	EA	\$ 25,000	\$ 450,000			\$ 37,000	
5.1d	CT'S	18	EA EA	\$ 13,000	\$ 234,000 \$ -			\$ 21,000	
5.1e 5.1f	CCVT'S Arresters	18	EA	\$ 13,000 \$ 6,500	\$ 117,000	\$ 8,000 \$ 1,500	\$ 27,000	\$ 21,000 \$ 8,000	\$ - \$ 144,000
5.1g	Wave Traps	6	EA	\$ 13,000	\$ 78,000		\$ 48,000	\$ 21,000	
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000		\$ 50,000	\$ 250,000	
5.2	230kV			¢ 25.555	<u>^</u>	45.055	ć	A 50.000	
5.2a	Line Switches - 3ph w/ motor operator	0		\$ 35,000	\$ - \$ -		\$ - \$ -	\$ 50,000	
5.2b 5.2c	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA EA	\$ 30,000 \$ 13,000	\$ -	\$ 17,500 \$ 8,000	т	\$ 47,500 \$ 21,000	•
5.2d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.2e	CCVT'S	0		\$ 10,000	\$ -	,	\$ -	\$ 16,000	
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	,	\$ -	\$ 21,000	•
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j				1					
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0		\$ 28,000	\$ -	\$ 17,500		\$ 45,500	
5.3c	VT'S	0		\$ 13,000		\$ 8,000		\$ 21,000	
5.3d	CT'S	0	EA	\$ 13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.3e	CCVT'S	0		\$ 8,000		\$ 8,000		\$ 16,000	
5.3f	Arresters	0		\$ 3,420		\$ 6,000		\$ 9,420	
5.3g	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	ltem Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
5.3j	Fuses	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
TOTAL CRANI	EQUIPTMENT / MATERIALS					ć 1.310.000		\$ 590,000		\$	4 000 000
	DUSE / PANELS / GENERATOR					\$ 1,319,000		\$ 590,000		\$	1,909,000
	CONTROL HOUSE	1	EA	\$	1,950,000	\$ 1,950,000	\$ 340,000	\$ 340,000	\$ 2,290,000	\$	2,290,000
0.1	CONTROL MOOSE		LA.	7	1,550,000	7 1,550,000	340,000	ý 540,000	2,230,000		2,250,000
6.2	Protection and Telecom Equipment Panels	31	EA	\$	35,000	\$ 1,085,000	\$ 10,000	\$ 310,000	\$ 45,000	\$	1,395,000
6.3	125VDC Batteries	2	EA	\$	75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$	200,000
6.4	Control Cables	1	LS	\$	227,920	\$ 227,920	\$ 227,920	\$ 227,920	\$ 455,840	\$	455,840
6.5	SCADA and Communications	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	Low Voltage AC Distribution	2	EA	\$	50,000				\$ 150,000		300,000
	DC Distribution System	2	EA	\$	50,000	· · · · · · · · · · · · · · · · · · ·		\$ 200,000	\$ 150,000		300,000
	Security	1	EA	\$	7,500		\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
	Fire Alarm	1	EA	\$	7,500				\$ 15,000		15,000
6.10	Generator	1	EA	\$	100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
TOTAL CONT	DOLLIGHES / DANIELS / SENIEDATOR										
	ROL HOUSE / PANELS / GENERATOR					\$ 3,727,920		\$ 1,422,920		\$	5,150,840
7. MISC ITEMS		200	15	4	405.00	ć 37.000	ć 470.00	ć 24.000	ć 255	_	74.000
7.1	Conduit & Cable Trench System	200	LF	\$	185.00	\$ 37,000	\$ 170.00	\$ 34,000	\$ 355	\$	71,000
7.2	Rigid Bus	100	LF	\$	125.07	\$ 12,507	\$ 237.10	\$ 23,710	\$ 362	\$	36,217
7.3	Strain Bus	600	LF	\$	39.30			·			55,590
	Grounding System	13,000	LF EA	\$	6.93 2,000	·	\$ 32.58 \$ 1,050	\$ 423,540	\$ 40 \$ 3,050		513,630
	Strain Bus Insulators - 345kV Strain Bus Insulators - 230kV	0	EA	\$	1,400		\$ 750	\$ -	\$ 2,150		
	Strain Bus Insulators - 250kV Strain Bus Insulators - 115kV	0	EA	Ś			\$ 550	\$ -	\$ 2,130	\$	
	Low Voltage AC Station Service	1	LS	\$	50,000			Ÿ	\$ 125,000		125,000
	SSVT Service	1	LS	\$	45,000		\$ 45,000	\$ 45,000	\$ 90,000		90,000
	Control Conduits from Trench to Equipment	1	LS	\$	50,000		\$ 50,000	\$ 50,000	\$ 100,000	\$	100,000
	Misc. Materials (Above and Below Ground)	1	LS	\$	50,000				\$ 100,000	_	100,000
7.12				Ť	00,000	7 23,555	+	7 22,000	+	-	
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20											
TOTAL - MISC I	ITEMS					\$ 358,177		\$ 733,260		\$	1,091,437
-	town Substation GIS - Install					\$ 20,040,102		\$ 9,831,655		\$	29,871,757
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization					A		A	A	_	
	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 298,718	\$ 298,718	\$ 298,718	\$	298,718
8.2	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ -	\$ 1,135,351	\$ 1,135,351	\$ 1,135,351	\$	1,135,351
	and Cost Manager, SHEQ Staff, and Admin Staff)										
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 298,718	\$ 298,718	\$ 298,718	\$	298,718
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 298,718	\$ 298,718	\$ 298,718	\$	298,718
	Engineering										
	Design Engineering	1		\$		\$ -	\$ 2,389,741		. , ,		2,389,741
	LiDAR	-	LS	\$		\$ -	\$ -		\$ -		-
	Geotech	-	EA	\$		\$ -	\$ 3,500		\$ 3,500		-
	Surveying/Staking	1	Site	\$	-	\$ -	\$ 209,102	\$ 209,102	\$ 209,102	\$	209,102
	Testing & Commissioning			-							
	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 896,153	\$ 896,153	\$ 896,153	\$	896,153
	Permitting and Additional Costs		10	_		ć	<u> </u>	<u>^</u>	^	_	
	Environmental Licensing & Permitting Costs	-	LS	\$			\$ -	\$ -	\$ -	\$	-
0.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -		\$ -	\$	-
	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 89,615	\$ 89,615	\$ 89,615	ć	89,615

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.13	Real Estate Costs (New)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ 198,000	\$ 198,000	\$ 198,000	\$ 198,000
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 1,603	3,208	\$ 1,603,208	\$ -	\$ -	\$ 1,603,208	\$ 1,603,208
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 1,091	\$ 1,091	\$ 1,091	\$ 1,091
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,603,208		\$ 5,815,206		\$ 7,418,414

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Q. SS Princetown GIS - Install

NAT & NYPA - T027 - (Segment A, Double Circuit) ESTIMATE ASSUMPTIONS & CLARIFICATIONS

- 1 Cost Estimate is based on 2017 rates.
- Construction schedule is in accordance with proposed schedule we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
- We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
- 4 All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
- 5 We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type.
- 6 Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
- Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
- 8 | Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
- 9 A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
- 10 We have assumed that all project details provided are accurate unless noted otherwise.
- 11 Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
- 12 A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
- A contractor allowance of 3.289% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
- 14 An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
- 15 A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
- An allowance of 5% for transmission design and engineering has been included in the total section.
- 17 An allowance of 8% for substation design and engineering has been included in the total section.
- 18 An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
- An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
- 20 An allowance of 3.75% for substation testing and commissioning has been included in the total section.
- 21 An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
- 22 New York state sales tax of 8% is included in all material pricing.
- 23 An allowance of 1.5% for insurance is included in the DPS sheet.
- The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.



1 Transmission Lines 1.1 Clearing & Access 1.2 Foundations 1.3 Structures 1.4 Conductor, Shiedwire and OPGW 1.5 Insulators, Fitting and Hardwares Subtotal (1) 2 Substations	\$50,021 \$23,713 \$60,645 \$35,494 \$11,907 \$181,780 \$47,340 \$2,153 \$12,718 \$5,264
1.1 Clearing & Access 1.2 Foundations 1.3 Structures 1.4 Conductor, Shiedwire and OPGW 1.5 Insulators, Fitting and Hardwares Subtotal (1) 2 Substations	\$23,713 \$60,645 \$35,494 \$11,907 \$181,780 \$47,340 \$2,153 \$12,718
1.2 Foundations 1.3 Structures 1.4 Conductor, Shiedwire and OPGW 1.5 Insulators, Fitting and Hardwares Subtotal (1) 2 Substations	\$23,713 \$60,645 \$35,494 \$11,907 \$181,780 \$47,340 \$2,153 \$12,718
1.3 Structures 1.4 Conductor, Shiedwire and OPGW 1.5 Insulators, Fitting and Hardwares Subtotal (1) 2 Substations	\$60,645 \$35,494 \$11,907 \$181,780 \$47,340 \$2,153 \$12,718
1.4 Conductor, Shiedwire and OPGW 1.5 Insulators, Fitting and Hardwares Subtotal (1) 2 Substations 2.1 Pottordom Substation	\$35,494 \$11,907 \$181,780 \$47,340 \$2,153 \$12,718
1.5 Insulators, Fitting and Hardwares Subtotal (1) 2 Substations	\$11,907 \$181,780 \$47,340 \$2,153 \$12,718
Subtotal (1) 2 Substations 2.1 Pottordom Substation	\$181,780 \$47,340 \$2,153 \$12,718
2 Substations 2.1 Pottordam Substation	\$47,340 \$2,153 \$12,718
2.1 Patterdam Substation	\$2,153 \$12,718
2.1 Rotterdam Substation	\$2,153 \$12,718
	\$12,718
$\frac{3}{2}$ 2.2 Edic Substation	
2.2 Edic Substation 2.3 Princetown Substation 2.1 Rotterdam Substation 2.2 Edic Substation 2.3 Princetown Substation	\$5,264
2.4 New Scotland Substation	
2.5 Porter Substation	\$546
2.6 Knickerbocker Substation	\$0
2.7 Marcy Substation	\$0
2.8 Substation Interconnections	\$8,301
Subtotal (2)	\$76,322
Total (1+2)	\$258,101
Contractors Mark-up (15% of Total 1+2)	\$38,715
Total Direct Cost (A)	\$296,817
3 Technical Services Costs	
3.1 Contractor Mobilization / Demobilization	\$2,581
3.2 Project Management, Material Handling & Amenities	\$18,345
8 3.3 Engineering	\$17,676
3.3 Engineering 3.4 Testing & Commissioning 3.5 Permitting, Real Estate, Sales Tax and Additional Costs	\$1,815
3.5 Permitting, Real Estate, Sales Tax and Additional Costs	\$20,529
3.6 Compensation for use of NYPA Structures (1 Ckt.)	\$8,919
3.7 Legal, Env. Lisc. & Permit and Env. Mitigation	\$8,096
Total Indirect Cost (3)	\$77,961
Subtotal Project Cost (B=A+3) 2017 \$	\$374,778
4 Network Upgrade Facilities (NUF)	
4.1 NUF proposed as element of the Project (Marcy and Edic Terminals)	\$7,727
4.2 NUF identified during Evaluation	\$0
Subtotal NUF Cost (C)	\$7,727
Total Project Cost (B+C) 2017 \$	\$382,505
Total Project Cost 2018 \$	\$393,980

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NAT & NYPA - T028 - (Segment A, Enhanced) Estimate Revision: 5

	NAT & NYPA - T028 - (Segment A, Enhanced) - Direct Costs	Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Edic to Princetown	\$ 122,948,939
Direct Labor, Material & Equipment Costs	B. Transmission Line Princetown to Rotterdam	\$ 20,488,282
Direct Labor, Material & Equipment Costs	C. Transmission Line Princetown to New Scotland	\$ 38,342,499
Direct Labor, Material & Equipment Costs	D. Rotterdam Substation - Install	\$ 43,728,474
Direct Labor, Material & Equipment Costs	E. Rotterdam Substation - Removal	\$ 3,611,030
Direct Labor, Material & Equipment Costs	F. Edic Substation - Install	\$ 2,117,185
Direct Labor, Material & Equipment Costs	G. Edic Substation - Removal	\$ 35,750
Direct Labor, Material & Equipment Costs	H. New Scotland Substation - Install	\$ 5,182,753
Direct Labor, Material & Equipment Costs	I. New Scotland Substation - Removal	\$ 81,300
Direct Labor, Material & Equipment Costs	J. Porter Substation - Install	\$ 71,912
Direct Labor, Material & Equipment Costs	K. Porter Substation - Removal	\$ 474,313
Direct Labor, Material & Equipment Costs	L. Interconnection Edic Station	\$ 1,784,075
Direct Labor, Material & Equipment Costs	M. Interconnection New Scotland Station	\$ 2,594,271
Direct Labor, Material & Equipment Costs	N. Interconnections (Various Lines for Edic to New Scotland)	\$ -
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$ -
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$ 5,519,000
Direct Labor, Material & Equipment Costs	Q. Interconnection Rotterdam Station	\$ 3,922,412
Direct Labor, Material & Equipment Costs	R. Princetown Switchyard - Install	\$ 12,718,239
	SUBTOTAL:	\$ 263,620,435
	CONTRACTOR MARK-UP (OH&P)	\$ 39,543,065
	CONTINGENCY ON ENTIRE PROJECT	\$ -
	TOTAL DIRECT:	\$ 303,163,500

	NAT & NYPA - T028 - (Segment A, Enhanced) - Indirect Costs	To	otal Each Segment
Indirect Costs	A. Transmission Line Edic to Princetown	\$	37,913,843
Indirect Costs	B. Transmission Line Princetown to Rotterdam	\$	4,538,550
Indirect Costs	C. Transmission Line Princetown to New Scotland	\$	9,279,647
Indirect Costs	D. Rotterdam Substation - Install	\$	10,844,525
Indirect Costs	E. Rotterdam Substation - Removal	\$	596,103
Indirect Costs	F. Edic Substation - Install	\$	522,430
Indirect Costs	G. Edic Substation - Removal	\$	5,866
Indirect Costs	H. New Scotland Substation - Install	\$	1,260,653
Indirect Costs	I. New Scotland Substation - Removal	\$	13,340
Indirect Costs	J. Porter Substation - Install	\$	14,798
Indirect Costs	K. Porter Substation - Removal	\$	77,824
Indirect Costs	L. Interconnection Edic Station	\$	343,365
Indirect Costs	M. Interconnection New Scotland Station	\$	514,737
Indirect Costs	N. Interconnections (Various Lines for Edic to New Scotland)	\$	-
Indirect Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Indirect Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	1,380,000
Indirect Costs	Q. Interconnection Rotterdam Station	\$	690,199
Indirect Costs	R. Princetown Switchyard - Install	\$	3,249,664
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitagation)	\$	8,095,924
	TOTAL INDIRECT	T: \$	79,341,468

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Direct & Indirect Totals

TOTAL ESTIMATED COST: \$

382,504,967

A. Transmission Line Edic to Princetown

NAT & NYPA - T028 - (Segment A, Enhanced)

Estimate Revision: Total: \$ 160,862,783

NAT & NYPA - T028 - (Segment A	A, Enha	nced)		
		Supply	Installation	Total
A. Transmission Line Edic to Princetown				
1. CLEARING & ACCESS	\$	41,500	\$ 35,680,876	\$ 35,722,376
2. FOUNDATIONS	\$	3,098,282	\$ 10,723,946	\$ 13,822,229
3. STRUCTURES	\$	14,839,646	\$ 25,190,231	\$ 40,029,876
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	4,932,573	\$ 20,897,590	\$ 25,830,163
5. INSULATORS, FITTINGS, HARDWARE	\$	5,125,311	\$ 2,418,984	\$ 7,544,295
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	2,242,985	\$ 35,670,858	\$ 37,913,843
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	30,280,297	\$ 130,582,485	\$ 160,862,783
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	30,280,297	\$ 130,582,485	\$ 160,862,783

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material	Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Trans	mission Line Edic to Princetown									
1. CLEARING 8	& ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	8.0	Acre	\$ -	\$	-	\$ 15,000	\$ 120,000	\$ 15,000	\$ 120,000
1.2	Clearing the ROW - Light (mowing)	194.0	Acre		\$	-	\$ 5,000	\$ 970,000	\$ 5,000	\$ 970,000
1.3	Permanent Access Road	70,540.8	LF	\$ -	\$	-	\$ 45			\$ 3,174,336
1.4	Silt Fence	352,704.0	LF	\$ -	\$	-	\$ 4	, , , , , ,		\$ 1,410,816
1.5	Matting - Access and ROW	282,163.2	LF	\$ -	\$	-	\$ 70	, . ,		\$ 19,751,424
1.6	Matting - To Work Area	25,200.0	LF	\$ -	\$	-	\$ 70		·	\$ 1,764,000
1.7	Snow Removal	66.8	Mile	\$ -	\$	-	\$ 16,000	\$ 1,068,800		
1.8	ROW Restoration	66.8	Mile	\$ -	\$	-	\$ 10,000		· ,	
1.9	Work Pads	1,680,000.0	SF	\$ -	\$	-	\$ 4	,,		9 3)313)000
1.10	Restoration for Work Pad areas	336,000.0	SF EA	\$ -	\$	-	\$ 0.15 \$ 20,035		\$ 0 \$ 20,035	7
1.11	Temporary Access Bridge Air Bridge	-	EA EA	\$ -	\$		\$ 20,035 \$ 14,445	•	\$ 20,035	
1.13	Stabilized Construction Entrance	- 50	EA EA	\$ -	\$		\$ 4,580			
1.14	Maintenance and Protection of Traffic on Public Roads	100	LS	\$ -	¢	-	\$ 4,130		\$ 4,130	
1.15	Culverts / Misc. Access	100	EA EA	\$ 750	1 6		\$ 1,250			
1.16	Gates	17	EA	\$ 2,000		34,000	\$ 2,500	\$ 42,500	\$ 4,500	
1.17	Concrete Washout Station	50	EA	\$ -	Ś		\$ 1,850	\$ 92,500		
	RING & ACCESS:			,	Ś	41,500	-,	\$ 35,680,876		\$ 35,722,376
2. FOUNDATION	DNS									. , ,
2.1	Direct Embed Foundations - 4' x 16'	416	EA	\$ 94:	\$	391,345	\$ 7,398	\$ 3,077,513	\$ 8,339	\$ 3,468,858
2.2	Direct Embed Foundations - 4' x 17'	2	EA	\$ 999	i s	1,990	\$ 7,833	\$ 15,666	\$ 8,828	\$ 17,656
2.3	Direct Embed Foundations - 4' x 19'	52	EA	\$ 1,10		57,404	\$ 8,703	\$ 452,576		
2.4	Direct Embed Foundations - 4' x 21'	4	EA	\$ 1,21		4,851	\$ 9,574		\$ 10,786	
2.5	Direct Embed Foundations - 4' x 23'	16	EA	\$ 1,32	2 5	21,144	\$ 10,444	\$ 167,105	\$ 11,766	\$ 188,249
2.6	Direct Embed Foundations - 4' x 25'	4	EA	\$ 1,430		5,721	\$ 11,314	\$ 45,258		
2.7	Direct Embed Foundations - 6' x 18'	6	EA	\$ 1,85		11,145	· · · · · · · · · · · · · · · · · · ·	\$ 111,621	\$ 20,461	\$ 122,766
2.8	Direct Embed Foundations - 6' x 19'	6	EA	\$ 1,95		11,711		\$ 117,496		\$ 129,207
2.9	Direct Embed Foundations - 6' x 20'	14	EA	\$ 2,04		28,648				
2.10	Direct Embed Foundations - 6' x 21'	15	EA	\$ 2,14		32,110	\$ 21,541	\$ 323,113		
2.11	Direct Embed Foundations - 6' x 22'	7	EA	\$ 2,23			\$ 22,520			
2.12	Direct Embed Foundations - 6' x 25'	6	EA	\$ 2,51		15,109	\$ 25,457	\$ 152,744		
2.13	Direct Embed Foundations - 6' x 26'	1	EA	\$ 2,61		2,613	\$ 26,437	\$ 26,437	\$ 29,049	
2.14	Direct Embed Foundations - 6' x 28'	3	EA	\$ 2,70			\$ 27,416	\$ 82,247	\$ 30,123	\$ 90,368
2.14	Direct Embed Foundations - 6' x 29'	3	EA EA	\$ 2,89			\$ 27,416	· · · · · · · · · · · · · · · · · · ·		
					<u> </u>					
2.16	Direct Embed Foundations - 6' x 33'	3	EA	\$ 3,27		9,820				
2.17	Direct Embed Foundations - 7' x 27'	2	EA	\$ 3,33		6,673				
2.18	Direct Embed Foundations - 7' x 28'	1	EA	\$ 3,45	! \$	3,452	\$ 38,648	\$ 38,648	\$ 42,101	\$ 42,101

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
2.19	Direct Embed Foundations - 7' x 49'	1	EA	\$ 5,880	\$ 5,880	\$ 66,635	\$ 66,635	\$ 72,515	\$ 72,515
2.20	Direct Embed Foundations - 7' x 61'	1	EA	\$ 7,267	\$ 7,267	\$ 82,628	\$ 82,628	\$ 89,894	\$ 89,894
2.21	Drilled Pier - 6' x 20'	54	EA	\$ 18,064	\$ 975,459	\$ 18,261	\$ 986,079	\$ 36,325	\$ 1,961,539
2.22	Drilled Pier - 7' x 19'	15	EA	\$ 23,416	\$ 351,246	\$ 23,671	\$ 355,070	\$ 47,088	\$ 706,315
2.23	Drilled Pier - 7' x 21'	12	EA	\$ 25,758	\$ 309,096	\$ 26,038	\$ 312,461	\$ 51,796	\$ 621,558
2.24	Drilled Pier - 7' x 22'	6	EA	\$ 26,929	\$ 161,573	\$ 27,222	\$ 163,332	\$ 54,151	\$ 324,905
2.26	Drilled Pier - 7' x 23'	3	EA	\$ 28,100	\$ 84,299	\$ 28,406	\$ 85,217	\$ 56,505	\$ 169,516
2.27	Drilled Pier - 7' x 33'	6	EA	\$ 39,808	\$ 238,847	\$ 40,241	\$ 241,447	\$ 80,049	\$ 480,295
2.28	Drilled Pier - 7' x 42'	3	EA	\$ 50,345	\$ 151,036	\$ 50,893	\$ 152,680	\$ 101,239	\$ 303,716
2.29	Drilled Pier - 8' x 27'	2	EA	\$ 42,819	\$ 85,637	\$ 57,340	\$ 114,680	\$ 100,158	\$ 200,317
2.30	Drilled Pier - 8' x 29'	2	EA	\$ 45,877	\$ 91,754	\$ 61,436	\$ 122,871	\$ 107,313	\$ 214,625
2.31	Rock Excavation Adder	1,342	СҮ	\$ -	\$ -	\$ 2,000	\$ 2,684,000	\$ 2,000	\$ 2,684,000
TOTAL - FOUN	DATIONS:				\$ 3,098,282		\$ 10,723,946		\$ 13,822,229
3. STRUCTURE	S								
3.1	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 115'	7	Structure	\$ 50,024	\$ 350,168	\$ 30,014	\$ 210,101	\$ 80,038	\$ 560,269
3.2	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 120'	4	Structure	\$ 52,207	\$ 208,828	\$ 31,324	\$ 125,297	\$ 83,531	\$ 334,125
3.3	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 130'	3	Structure	\$ 58,257	\$ 174,770	\$ 34,954	\$ 104,862	\$ 93,210	\$ 279,631
3.4	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 135'	10	Structure	\$ 60,884	\$ 608,835	\$ 36,530	\$ 365,301	\$ 97,414	\$ 974,136
3.5	1-CKT 345KV VERTICAL TANGENT (0°-1°) - 145'	1	Structure	\$ 64,473	\$ 64,473	\$ 38,684	\$ 38,684	\$ 103,156	\$ 103,156
3.6	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 115'	1	Structure	\$ 72,039	\$ 72,039	\$ 43,223	\$ 43,223	\$ 115,262	\$ 115,262
3.7	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 130'	3	Structure	\$ 85,082	\$ 255,245	\$ 51,049	\$ 153,147	\$ 136,130	\$ 408,391
3.8	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°) - 135'	1	Structure	\$ 92,278	\$ 92,278	\$ 55,367	\$ 55,367	\$ 147,645	\$ 147,645
3.9	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$ 116,328	\$ 116,328	\$ 69,797	\$ 69,797	\$ 186,125	\$ 186,125
3.10	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 120'	1	Structure	\$ 127,558	\$ 127,558	\$ 76,535	\$ 76,535	\$ 204,092	\$ 204,092
3.11	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 150'	1	Structure	\$ 208,033	\$ 208,033	\$ 124,820	\$ 124,820	\$ 332,852	\$ 332,852
3.12	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 160'	1	Structure	\$ 238,595	\$ 238,595	\$ 143,157	\$ 143,157	\$ 381,751	\$ 381,751
3.13	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 75'	1	Structure	\$ 24,476	\$ 24,476	\$ 14,685	\$ 14,685	\$ 39,161	\$ 39,161
3.14	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 80'	2	Structure	\$ 25,826	\$ 51,652	\$ 15,496	\$ 30,991	\$ 41,322	\$ 82,643
3.15	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 84'	169	Structure	\$ 29,526	\$ 4,989,894	\$ 17,716	\$ 2,993,936	\$ 47,242	\$ 7,983,830
3.16	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 89'	36	Structure	\$ 32,708	\$ 1,177,488	\$ 19,625	\$ 706,493	\$ 52,333	\$ 1,883,981
3.17	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 93'	23	Structure	\$ 34,540	\$ 794,409	\$ 20,724	\$ 476,645	\$ 55,263	\$ 1,271,054
3.18	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 98'	10	Structure	\$ 37,500	\$ 374,995	\$ 22,500	\$ 224,997	\$ 59,999	\$ 599,992
3.19	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 102'	4	Structure	\$ 43,901	\$ 175,602	\$ 26,340	\$ 105,361	\$ 70,241	\$ 280,963
3.20	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 107'	2	Structure	\$ 45,936	\$ 91,871	\$ 27,561	\$ 55,123	\$ 73,497	\$ 146,994
3.21	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 80'	2	Structure	\$ 55,241	\$ 110,482	\$ 33,145	\$ 66,289	\$ 88,386	\$ 176,771
3.22	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 85'	19	Structure	\$ 57,813	\$ 1,098,438	\$ 34,688	\$ 659,063	\$ 92,500	\$ 1,757,500
3.23	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 90'	2	Structure	\$ 61,050	\$ 122,100	\$ 36,630	\$ 73,260	\$ 97,680	\$ 195,360
3.24	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 95'	2	Structure	\$ 65,120	\$ 130,240	\$ 39,072	\$ 78,144	\$ 104,192	\$ 208,384
3.25	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 100'	1	Structure	\$ 68,635	\$ 68,635	\$ 41,181	\$ 41,181	\$ 109,816	\$ 109,816
3.26	1-CKT 345KV H-FRAME SMALL ANGLE (1°-15°) - 105'	1	Structure	\$ 72,872	\$ 72,872	\$ 43,723	\$ 43,723	\$ 116,594	\$ 116,594
3.27	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 75'	2	Structure	\$ 61,513	\$ 123,025	\$ 36,908	\$ 73,815	\$ 98,420	\$ 196,840
3.28	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 80'	3	Structure	\$ 69,079	\$ 207,237	\$ 41,447	\$ 124,342	\$ 110,526	\$ 331,579
3.29	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 85'	4	Structure	\$ 75,739	\$ 302,956	\$ 45,443	\$ 181,774	\$ 121,182	\$ 484,730
3.30	1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 90'	4	Structure	\$ 81,493	\$ 325,970	\$ 48,896	\$ 195,582		
3.31	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 80'	1	Structure	\$ 97,403	\$ 97,403	\$ 58,442	\$ 58,442	\$ 155,844	\$ 155,844
3.32	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 85'	6	Structure	\$ 105,802					
3.33	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 90'	6	Structure	\$ 117,253		\$ 70,352		· · · · · · · · · · · · · · · · · · ·	
3.34	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 95'	1	Structure	\$ 129,408		\$ 77,645			
3.35	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$ 178,026	\$ 178,026	\$ 106,815			
3.36	Remove Existing Foundation	50	EA	\$ -	\$ -	\$ 7,500			
3.37	Remove Existing Structure and Accessories	994	EA	\$ -	\$ -	·	\$ 12,425,000		
3.38	Install Grounding and Grounding Accessories	666	Pole	\$ 506	\$ 336,996	\$ 5,539	\$ 3,688,641	\$ 6,045	\$ 4,025,637
3.39									
3.40									

	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sun	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
TOTAL - STRUCT	TURES:				\$ 14,839,64	5	\$ 25,190,231		\$ 40,029,876
4. CONDUCTOR,	, SHIELDWIRE, OPGW								
4.1 3	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (Edic to 12.6 Miles)	2,228,688	LF	\$ 1.90	\$ 4,234,50	7 \$ 5.00	\$ 11,143,440	\$ 6.90	\$ 15,377,947
4.2	(1) OPGW 36 Fiber AC-33/38/571 (Edic to 12.6 Miles)	301,954	LF	\$ 1.35	\$ 407,63	3 \$ 5.00	\$ 1,509,770	\$ 6.35	\$ 1,917,408
4.3	(1) 3/8" EHS7 Steel (Edic to 12.6 Miles)	271,656	LF	\$ 0.47	\$ 127,67	3 \$ 5.00	\$ 1,358,280	\$ 5.47	\$ 1,485,958
4.4									
4.5									
4.6									
	Remove Existing Conductor and Accessories	121.0	Mile	\$ -	\$ -	\$ 30,000	\$ 3,630,000	\$ 30,000.00	
4.8	Remove Existing OPGW and Accessories	108.4	Mile	\$ -	\$ -	\$ 12,000	\$ 1,300,800	\$ 12,000.00	
4.9	Remove Existing OHSW and Accessories	108.4	Mile	\$ -	\$ -	\$ 12,000	\$ 1,300,800	\$ 12,000.00	\$ 1,300,800
4.10									
4.11									
4.12									
	Rider Poles (187 Locations)	93	Set	\$ 1,750				\$ 5,250.00	
	Rider Poles - Relocated	94	Set	\$ -	\$ -	\$ 3,500		\$ 3,500.00	
	CTOR, SHIELDWIRE, OPGW:				\$ 4,932,57	3	\$ 20,897,590		\$ 25,830,163
	FITTINGS, HARDWARE								
	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,276	Assembly	\$ 1,800	\$ 2,296,80				
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	480	Assembly	\$ 1,800	\$ 864,00) \$ 720	· ·	\$ 2,520	
5.3		-	Assembly		\$ -		\$ -	\$ -	\$ -
	OPGW Assembly - Tangent	304	Assembly	\$ 200				\$ 350	
	OPGW Assembly - Angle / DE	64	Assembly	\$ 250		_	\$ 9,600	\$ 400	
	OHSW Assembly - Tangent	274	Assembly	\$ 200		_	\$ 41,100	\$ 350	
	OHSW Assembly - Angle / DE	56	Assembly	\$ 250					
	OPGW Splice Boxes	27	Assembly	\$ 1,746			\$ 61,398	\$ 4,020	
	OPGW Splice & Test	27	EA	\$ 2,520				\$ 5,040	
	Spacer - Conductor	5,244	EA	\$ 50				\$ 85	
	Vibration Dampers - Conductor	4,164	EA	\$ 35	\$ 145,74	_		\$ 70	
	Shield wire / OPGW Dampers, Misc. Fittings	1,087	EA	\$ 27				\$ 62	
	Replace - Mono Pole Vertical Tangent (1-Group of 18-Bells Each Assembly)	480	Assembly	\$ 1,800	\$ 864,00		\$ 345,600	\$ 2,520	
	Replace - Dead-end & Angle Insulators (1, Group of 18-Bells Each Assembly)	195	Assembly	\$ 1,800	\$ 351,00	_	\$ 140,400	\$ 2,520	
	Guys, Anchors, and Accessories	-	EA	\$ 912	\$ -	\$ 1,058	\$ -	\$ 1,970	\$ -
	Misc. materials (Signs and Markers)	66.8	Mile	\$ 770			\$ 67,201	\$ 1,776	
	ITORS, FITTINGS, HARDWARE:				\$ 5,125,31		\$ 2,418,984		\$ 7,544,295
A. Transm	nission Line Edic to Princetown				\$ 28,037,31	2	\$ 94,911,627		\$ 122,948,939
6. MOB/DEMOR	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
C	Contractor Mobilization / Demobilization								
6.1 N	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 1,229,489	\$ 1,229,489	\$ 1,229,489	\$ 1,229,489
F	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 6,280,035	\$ 6,280,035	\$ 6,280,035	\$ 6,280,035
6.3 L	Utility PM and Project Oversite	1	LS		\$ -	\$ 1,229,489	\$ 1,229,489	\$ 1,229,489	\$ 1,229,489
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 1,229,489	\$ 1,229,489	\$ 1,229,489	
	Engineering	1		7	-	7 1,225,465	+ 1,225,403	- 1,225,465	- 1,223,403
	Design Engineering	1	LS	\$ -	\$ -	\$ 6,147,447	\$ 6,147,447	\$ 6,147,447	\$ 6,147,447
	Lidar	1	LS	\$ -	\$ -	\$ 368,847			
	Geotech	67	Location	\$ -	\$ -				
	Surveying/Staking	1	LS	\$ -	\$ -				
	Testing & Commissioning	-		1	<u> </u>	1 222,013	. 222,313	1 222,513	
	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs	-		1	·	1 .5,000	,300		
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-	Environmental Mitigation	_	LS	\$ -	\$ -	- '	*	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e Ma	laterial Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 368,847	\$ 368,847	\$ 368,847	\$ 368,847
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ 8,640,000	\$ 8,640,000	\$ 8,640,000	\$ 8,640,000
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17	Compensation for use of 1 Ckt - NYPA Structures (92 Structures)	1	LS	\$ -	\$	-	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123
6.18	Sales Tax on Materials	1	LS	\$ 2,242,98	5 \$	2,242,985	\$ -	\$ -	\$ 2,242,985	\$ 2,242,985
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 122,949	\$ 122,949	\$ 122,949	\$ 122,949
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	2,242,985		\$ 35,670,858		\$ 37,913,843

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A. TL Edic-Princetown

NAT & NYPA - T028 - (Segment A, Enhanced)

B. Transmission Line Princetown to Rotterdam

Estimate Revision:

5

Total: \$ 25,026,832

NAT & NYPA - T028 - (Segmen	NAT & NYPA - T028 - (Segment A, Enhanced)									
		Supply	Installation		Total					
B. Transmission Line Princetown to Rotterdam										
1. CLEARING & ACCESS	\$	6,000	\$ 3,038,200	\$	3,044,200					
2. FOUNDATIONS	\$	417,002	\$ 3,778,708	\$	4,195,711					
3. STRUCTURES	\$	3,876,135	\$ 4,280,943	\$	8,157,078					
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	722,365	\$ 2,620,705	\$	3,343,070					
5. INSULATORS, FITTINGS, HARDWARE	\$	1,199,031	\$ 549,192	\$	1,748,223					
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	497,643	\$ 4,040,907	\$	4,538,550					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-					
SUBTOTAL:	\$	6,718,177	\$ 18,308,655	\$	25,026,832					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-					
TOTAL:	\$	6,718,177	\$ 18,308,655	\$	25,026,832					

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Trans	mission Line Princetown to Rotterdam								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	24.0	Acre	\$ -	\$ -	\$ 5,000	\$ 120,000	\$ 5,000	\$ 120,000
1.3	Permanent Access Road	5,280	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	26,400	LF	\$ -	\$ -	\$ 4			
1.5	Matting - Access and ROW	21,120	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	2,775	LF	\$ -	\$ -	\$ 70		\$ 70	
1.7	Snow Removal	5	Mile	\$ -	\$ -	\$ 16,000			\$ 80,000
1.8	ROW Restoration	5	Mile	\$ -	\$ -	\$ 10,000			\$ 50,000
1.9	Work Pads	185,000	SF SF	\$ - \$ -	\$ -	T .	\$ 651,200 \$ 5,550		
1.10	Restoration for Work Pad areas	37,000	EA EA	\$ - \$ -	\$ - \$ -	\$ 0.2 \$ 20,035		\$ 20,035	
1.11	Temporary Access Bridge Air Bridge	-	EA EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Stabilized Construction Entrance	10	EA EA	\$ -	\$ -	\$ 14,445		. , .	
1.14	Maintenance and Protection of Traffic on Public Roads	10	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	- 10	EA	\$ 2,000	\$ -	\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	8	EA	\$ 750	\$ 6,000	\$ 1,250			
1.17	Concrete Washout Station	10	EA	\$ -	\$ -	\$ 1,850			\$ 18,500
TOTAL - CLEAR	RING & ACCESS:				\$ 6,000		\$ 3,038,200		\$ 3,044,200
2. FOUNDATIO	DNS								
2.1	Direct Embed Foundations - 6' x 18'	56	EA	\$ 1,857	\$ 104,018	\$ 18,603	\$ 1,041,794		\$ 1,145,812
2.2	Direct Embed Foundations - 6' x 20'	4	EA	\$ 2,046	\$ 8,185	\$ 20,562			
2.3	Direct Embed Foundations - 6' x 22'	8	EA	\$ 2,235	\$ 17,880	\$ 22,520		,	
2.4	Direct Embed Foundations - 7' x 25'	4	EA	\$ 3,105	\$ 12,422	\$ 34,650	\$ 138,601	\$ 37,756	\$ 151,023
2.5	Drilled Pier - 6' x 19'	6	EA	\$ 17,204	\$ 103,223	\$ 17,391	\$ 104,347	\$ 34,595	\$ 207,570
2.6	Drilled Pier - 8' x 27'	4	EA	\$ 42,819	\$ 171,274	\$ 57,340	\$ 229,359	\$ 100,158	\$ 400,633
2.7	Rock Excavation Adder	1,001.1	CY	\$ -	\$ -	\$ 2,000	\$ 2,002,200	\$ 2,000	\$ 2,002,200
TOTAL - FOUN	DATIONS:				\$ 417,002		\$ 3,778,708		\$ 4,195,711
3. STRUCTURE	S								
3.1	2x 1-CKT 345KV DELTA TANGENT (0°-1°) - 115'	24	Structure	\$ 85,544	\$ 2,053,056	\$ 51,326	\$ 1,231,834	\$ 136,870	\$ 3,284,890
3.2	2x 1-CKT 345KV DELTA TANGENT (0°-1°) - 135'	2	Structure	\$ 106,005	\$ 212,010	\$ 63,603	\$ 127,206	\$ 169,608	\$ 339,216
3.3	2x 1-CKT 345KV DELTA SMALL ANGLE (1°-15°) - 115'	2	Structure	\$ 141,673	\$ 283,346	\$ 85,004	\$ 170,008	\$ 226,677	\$ 453,354
3.4	2x 1-CKT 345KV VERTICAL TANGENT DEADEND (0°-5°) - 115'	4	Structure	\$ 109,816	\$ 439,264	\$ 65,890	\$ 263,558	\$ 175,706	\$ 702,822
3.5	2x 1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	2	Structure	\$ 232,656	\$ 465,312	\$ 139,594	\$ 279,187	\$ 372,250	\$ 744,499
3.6	2x 1-CKT 345KV 3-POLE LARGE ANGLE DEADEND (60°-90°) - 115'	1	Structure	\$ 176,342	\$ 176,342	\$ 105,805			
3.7	2x 1-CKT 345KV 3-POLE TANGENT DEADEND (0°-5°) - 65′	1	Structure	\$ 99,493	\$ 99,493	\$ 59,696	\$ 59,696		\$ 159,189
3.8	2x 1-CKT 345KV DELTA TANGENT (0°-1°) HD- 115′	1	Structure	\$ 105,820	\$ 105,820				
5.0	ENT ON SISK SEEM MIGHIN (O I) IID IIS		Structure	103,820	103,020	03,432	03,432	7 105,512	y 105,312

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.9	Remove Existing Foundation	22	EA	\$	-	\$ -	\$ 7,500	\$ 163,500	\$ 7,500	\$ 163,500
3.10	Remove Existing Structure and Accessories	109	EA	\$	-	\$ -	\$ 12,500	\$ 1,362,500	\$ 12,500	\$ 1,362,500
3.11	Install Grounding and Grounding Accessories	82	Pole	\$	506	\$ 41,492	\$ 5,539	\$ 454,157	\$ 6,045	\$ 495,649
	CTURES PRINCTOWN TO NEW SCOTLAND:					\$ 3,876,135		\$ 4,280,943		\$ 8,157,078
	DR, SHIELDWIRE, OPGW									
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (R1 - R36)	339,293	LF	\$	1.90	\$ 644,657	\$ 5.00	\$ 1,696,465	\$ 6.90	\$ 2,341,122
4.2	(1) OPGW 36 Fiber AC-33/38/571 (R1 - R36)	28,274	LF	\$	1.35	· · · · · · · · · · · · · · · · · · ·	\$ 5.00	\$ 141,370	-	\$ 179,540
4.3	(1) 3/8" EHS7 Steel (R1 - R36)	28,274	LF	\$	0.47	\$ 13,289	\$ 5.00	\$ 141,370		\$ 154,659
4.5	Remove Existing Conductor and Accessories	10.0	Mile	\$	-	\$ -	\$ 30,000	\$ 300,000		\$ 300,000
4.6	Remove Existing OPGW and Accessories	10.0	Mile	\$	-	\$ -	\$ 12,000	\$ 120,000	, , , , , , , , , , , , , , , , , , , ,	\$ 120,000
4.7	Remove Existing OHSW and Accessories	10.0	Mile	\$		\$ -	\$ 12,000	\$ 120,000	, , , , , , , , , , , , , , , , , , , ,	\$ 120,000
4.8	Rider Poles	15	EA	\$	1,750	\$ 26,250	\$ 3,500	\$ 52,500	\$ 5,250.00	\$ 78,750
4.9	Rider Poles - Relocated	14	Set	\$	-	\$ -	\$ 3,500	\$ 49,000	\$ 3,500.00	\$ 49,000
	UCTOR, SHIELDWIRE, OPGW:					\$ 722,365		\$ 2,620,705		\$ 3,343,070
5. INSULATOR	R, FITTINGS, HARDWARE									
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	348	Assembly	\$	1,800	\$ 626,400	\$ 720	\$ 250,560	, , , , ,	\$ 876,960
5.2	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	240	Assembly	\$	1,800	\$ 432,000	\$ 720	\$ 172,800	\$ 2,520	\$ 604,800
5.3	OPGW Assembly - Tangent	29	Assembly	\$	200	\$ 5,800	\$ 150	\$ 4,350	\$ 350	\$ 10,150
5.4	OPGW Assembly - Angle / DE	16	Assembly	\$	250	\$ 4,000	\$ 150	\$ 2,400	\$ 400	\$ 6,400
5.5	OHSW Assembly - Tangent	29	Assembly	\$	200	\$ 5,800	\$ 150	\$ 4,350	\$ 350	\$ 10,150
5.6	OHSW Assembly - Angle / DE	16	Assembly	\$	250	\$ 4,000	\$ 150	\$ 2,400	\$ 400	\$ 6,400
5.7	OPGW Splice Boxes	8	Assembly	\$	1,746	\$ 13,969	\$ 2,274	\$ 18,192	\$ 4,020	\$ 32,161
5.8	OPGW Splice & Test	8	EA	\$	2,520	\$ 20,160	\$ 2,520	\$ 20,160	\$ 5,040	\$ 40,320
5.9	Spacer - Conductor	1,002	EA	\$	50	\$ 50,100	\$ 35	\$ 35,070	\$ 85	\$ 85,170
5.10	Vibration Dampers - Conductor	852	EA	s	35	\$ 29,820	\$ 35	\$ 29,820	\$ 70	\$ 59,640
5.11	Shieldwire / OPGW Dampers, Misc. Fittings	116	EA	Ś	27		\$ 35	\$ 4,060	-	\$ 7,192
5.12	Guys, Anchors, and Accessories	-	EA	Ś		\$ -	\$ 1,058	\$ -		\$ -
5.13	Misc. materials (Signs and Markers)	5.0	Mile	Ś	770	·	\$ 1,006	\$ 5,030		\$ 8,880
	LATORS. FITTINGS. HARDWARE:	5.0	WIIIC	7	770	\$ 1,199,031	7 1,000	\$ 549,192	Ş 1,770	\$ 1,748,223
D Tuene	mission Line Dringstown to Dettorden					\$ 6,220,534		\$ 14,267,748		\$ 20,488,282
	mission Line Princetown to Rotterdam					\$ 0,220,334		\$ 14,207,748		20,466,262
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS									
C 1	Contractor Mobilization / Demobilization		1.5	Ś		\$ -	\$ 204.883	\$ 204.883	ć 204.002	\$ 204.883
6.1	Mob / Demob Project Management, Material Handling & Amenities	1	LS	\$	-	\$ -	\$ 204,883	\$ 204,883	\$ 204,883	\$ 204,883
6.2	Project Management, Waterial Handling & Americas Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 1,046,509	\$ 1,046,509	\$ 1,046,509	\$ 1,046,509
6.3	Utility PM and Project Oversite	1	LS			Ś -	\$ 204,883	\$ 204,883	\$ 204,883	\$ 204,883
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 204,883	\$ 204,883		\$ 204,883
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 1,024,414	\$ 1,024,414	\$ 1,024,414	\$ 1,024,414
6.6	LIDAR	1	LS	\$	-	\$ -	\$ 61,465	\$ 61,465	\$ 61,465	\$ 61,465
6.7	Geotech	5	Location	\$	-	\$ -	\$ 3,500	\$ 17,500	\$ 3,500	\$ 17,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 143,418	\$ 143,418	\$ 143,418	\$ 143,418
6.9	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	1	LS	\$	_	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
0.5	Permitting and Additional Costs	1	LJ .	+~	-	* *	7 40,000	÷ 40,000	40,000	
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$		\$ -	\$ -	\$ -		\$ -
6.12	Warranties / LOC's	1	LS	\$		\$ -	\$ 61,465			
6.13	Real Estate Costs (New ROW)	1	LS	\$		\$ -	\$ -	\$ -		\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$		\$ -	\$ 1,011,000	*		
6.15	Legal Fees	-	LS	\$		\$ -	\$ -	\$ -		\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$		\$ -		\$ -		\$ -
6.18	Sales Tax on Materials	1	LS	\$	497,643	\$ 497,643	\$ -	\$ -	\$ 497,643	\$ 497,643
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 20,488	\$ 20,488	\$ 20,488	\$ 20,488

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 497,643		\$ 4,040,907		\$ 4,538,55

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NAT & NYPA - T028 - (Segment A, Enhanced) C. Transmission Line Princetown to New Scotland

Estimate Revision: 5 Total: \$ 47,622,147

NAT & NYPA - T028 - (Segment A, En	nance	d)		
		Supply	Installation	Total
C. Transmission Line Princetown to New Scotland				
1. CLEARING & ACCESS	\$	31,000	\$ 11,223,694	\$ 11,254,694
2. FOUNDATIONS	\$	1,194,705	\$ 4,499,949	\$ 5,694,653
3. STRUCTURES	\$	6,879,617	\$ 5,578,039	\$ 12,457,656
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	1,564,842	\$ 4,756,290	\$ 6,321,132
5. INSULATORS, FITTINGS, HARDWARE	\$	1,767,073	\$ 847,291	\$ 2,614,365
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	914,979	\$ 8,364,668	\$ 9,279,647
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	12,352,215	\$ 35,269,931	\$ 47,622,147
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	12,352,215	\$ 35,269,931	\$ 47,622,147

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Transr	nission Line Princetown to New Scotland								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	26.0	Acre	\$ -	\$ -	\$ 15,000	\$ 390,000	\$ 15,000	\$ 390,000
1.2	Clearing the ROW - Light (mowing)	57.0	Acre	\$ -	\$ -	\$ 5,000	\$ 285,000	\$ 5,000	\$ 285,000
1.3	Permanent Access Road	20,803.2	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	104,016.0	LF	\$ -	\$ -	\$ 4	,		\$ 416,064
1.5	Matting - Access and ROW	83,212.8	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	3,375.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	19.7	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	19.7	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	645,000.0	SF	\$ -	\$ -	\$ 4			\$ 2,270,400
1.10	Restoration for Work Pad areas	129,000.0	SF	\$ -	\$ -	\$ 0.2			\$ 19,350
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	2	EA	\$ -	\$ -	\$ 14,445	\$ 28,890		\$ 28,890
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580		\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	50	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	11	EA	\$ 2,000	, , , , , , , , , , , , , , , , , , , ,	, , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	,
1.16	Culverts / Misc. Access	12	EA	\$ 750		, ,		. ,	
1.17	Concrete Washout Station	30	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
TOTAL - CLEAR					\$ 31,000		\$ 11,223,694		\$ 11,254,694
2. FOUNDATIO									
	Direct Embed Foundations - 4' x 16'	100	EA	\$ 941				. ,	
	Direct Embed Foundations - 4' x 19'	14	EA	\$ 1,104				,	
2.3	Direct Embed Foundations - 4' x 21'	2		\$ 1,213					
2.4	Direct Embed Foundations - 6' x 18'	9		\$ 1,857					
2.5	Direct Embed Foundations - 6' x 20'	14		\$ 2,046					
2.6	Direct Embed Foundations - 6' x 21'	25	EA	\$ 2,141					
2.7	Direct Embed Foundations - 6' x 22'	4	EA	\$ 2,235					
2.8	Direct Embed Foundations - 6' x 25'	5	EA	\$ 2,518					
2.9	Direct Embed Foundations - 6' x 29'	1	EA	\$ 2,896					
2.10	Direct Embed Foundations - 6' x 34'	4	EA	\$ 3,273					
2.11	Direct Embed Foundations - 6' x 42'	3	EA	\$ 4,123					
2.12	Direct Embed Foundations - 7' x 25'	1		\$ 3,105					
2.13	Direct Embed Foundations - 7' x 27'	1		\$ 3,337		\$ 37,316			\$ 40,652
2.14	Direct Embed Foundations - 7' x 28'	1	EA	\$ 3,452		\$ 38,648	\$ 38,648		\$ 42,101
2.15	Drilled Pier - 6' x 20'	6		\$ 18,064					
2.16	Drilled Pier - 7' x 19'	15		\$ 23,416					
2.17	Drilled Pier - 7' x 24'	3	EA	\$ 29,270					
2.18	Drilled Pier - 8' x 27'	1		\$ 42,819					
2.19	Drilled Pier - 8' x 83'	1	EA	\$ 128,456	\$ 128,456	\$ 172,020	\$ 172,020	\$ 300,475	\$ 300,475
2.20	Drilled Pier - 8' x 89'	1	EA	\$ 137,631	\$ 137,631	\$ 184,307	\$ 184,307	\$ 321,938	\$ 321,938
2.21	Drilled Pier - 9' x 34'	1	EA	\$ 67,740	\$ 67,740	\$ 90,713	\$ 90,713	\$ 158,454	\$ 158,454

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No.	Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
STREETMENT	2.22	Rock Excavation Adder	482.40	СУ	\$ -	\$ -	\$ 2,000	\$ 964,800	\$ 2,000	\$ 964,800
1-	TOTAL - FOUN	DATIONS:				\$ 1,194,705		\$ 4,499,949		\$ 5,694,653
1										
1.4 LOTT MANU PRINTER TANGET (P. 1) = 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100										
1.5 CCT PARKY VERTICAL POLICY 1-12-12-12-12-12-12-12-12-12-12-12-12-12										
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1.										
1. CT 1560 VERTICAL SAMELANDIG (1-15)-1372 1 Structure 5 52,787 5 53,897 5 53,897 5 136,898 1 1 1 1 1 1 1 1 1		, ,								
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13.13 SCRI SARVI HERMAN EMPORENT (12*1-19*2) 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SPRICE 5 SP	3.10		1	Structure	\$ 98,883	\$ 98,883	\$ 59,330	\$ 59,330	\$ 158,212	\$ 158,212
3 Sect Section 1 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Section 5 Secti	3.11	1-CKT 345KV H-FRAME TANGENT (0°-1°) - 84'	43	Structure	\$ 29,526	\$ 1,269,618	\$ 17,716	\$ 761,771	\$ 47,242	\$ 2,031,389
3.1 SCRT 3450V HERMAN ENDERN TOT 1-1-127 5 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-160 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-150 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-150 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-150 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-150 1 STOCKUME 5 S.320V HERMAN ENDERN MAGEL 1-125-1-150 S.320V HERMAN ENDERN MAGEL 1-125-1-150 S.320V HERMAN ENDERN MAGEL 1-125-1-150 S.320V HERMAN ENDERN MAGEL 1-125-1-150 S.320V HERMAN ENDERN MAGEL 1-125-1-150 S.320V HERMAN ENDERN MAGEL 1-125-1-		1-CKT 345KV H-FRAME TANGENT (0°-1°) - 89'		Structure						
1.1										
1.1 CCT 36NN FORT TARGET TO TARGET TO TO TARGET TO TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET TO TARGET T					,					
3.18 CCT SAVA 3-90 EMPORA MORE CARRON DESCRIPTOR S STRUCTURE S 75,79 S 45,444 S 45,445 S 722,020 S 53,544 S 318 CCT SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA SAVA 3-90 CETA										
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3.21 COLT ASKNY 3470 MEDIUM ANGELE DEADNED 15° 607-115° 1 5 5 106.815 5 284.841 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.84 5 22.8		, ,			. ,					
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3.22 2.CT 1.15CV/145CV VERTICAL TANGER IT ("0"-1") 15" 1 1 5 1.00 5 8.00 6 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.00 5 1.		, ,								
3.23 2-CRT 1158V/3956V VPRITICAL STANLA REPORT (1971) - 135" 1 Structure \$ 18,894 \$ 1,4336 \$ 14,336 \$ 1,136 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230 \$ 130,230										
2.74 2.CRT 115KY/34SKV VERTICAL SMALL ANGLE (1°1.5°) - 15° 1 Structure 5 149,480 5 89,688 5 89,688 5 239,168 5 239,168 3 233,16 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232,37 232										
3.26 2-CKT ISSN/QASKNV PERTICAL MEDIUM ANGLE DEADEND (15*-60") - 125" 1 Structure 5 202,797 5 202,797 5 121,678 5 124,678 5 324,475 5 386,12 3.28 Remove Existing Foundation 4 EA 5 .	3.24		1	Structure	\$ 149,480	\$ 149,480	\$ 89,688	\$ 89,688	\$ 239,168	\$ 239,168
3.27 15XV DLMMY TOE, Drilled Pier, BST 2 Structure 5 58,164 5 116,328 5 34,888 5 69,797 5 93,062 5 386,172 3.28 Remove Existing Foundation 4 EA 5 5 5 5 5 5 300,000 5 7,500 5 300,000 5 7,500 5 300,000 3.30 Install Grounding and Grounding Accessories 24 Pole 5 506 5 108,284 5 5,391 5 1,185,339 5 6,045 5 1,289,325 6 1,000,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000 5 1,200,000	3.25	2-CKT 115KV/345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$ 173,808	\$ 173,808	\$ 104,285			\$ 278,092
3.28 Remove Existing Foundation										
3.29 Remove Existing Structure and Accessories 24 EA \$. \$. \$. 12,500 \$ 300,000 \$ 12,500 \$ 300,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.00,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,000 \$ 3.25,00	3.27	115KV DUMMY DE, Drilled Pier, 85'	2	Structure	\$ 58,164	\$ 116,328	\$ 34,898	\$ 69,797	\$ 93,062	\$ 186,125
330 Install Grounding Accessories 214 Pole \$ 5.06 \$ 1.08,284 \$ 5.539 \$ 1.185,239 \$ 6,045 \$ 1.283,522 3	3.28	Remove Existing Foundation	4	EA	\$ -	\$ -	\$ 7,500	\$ 30,000	\$ 7,500	\$ 30,000
STATE STRUCTURES	3.29	Remove Existing Structure and Accessories	24	EA	\$ -	\$ -	\$ 12,500	\$ 300,000	\$ 12,500	\$ 300,000
State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State Stat	3.30	Install Grounding and Grounding Accessories	214	Pole	\$ 506	\$ 108,284	\$ 5,539	\$ 1,185,239	\$ 6,045	\$ 1,293,523
A.COMDUCTOR, SHIELDWIRE, OPGW	TOTAL - STRU					\$ 6,879,617		\$ 5,578,039		\$ 12,457,656
4.2 (1) OPGW 36 Fiber AC-33/38/571 (ENS-336 to ENS-464) 110,326	4. CONDUCTO	R, SHIELDWIRE, OPGW								
4.3	4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (ENS-336 to ENS-464)	661,954	LF	\$ 1.90	\$ 1,257,713	\$ 5.00	\$ 3,309,770	\$ 6.90	\$ 4,567,483
4.4 -	4.2	(1) OPGW 36 Fiber AC-33/38/571 (ENS-336 to ENS-464)	110,326	LF	\$ 1.35	\$ 148,940	\$ 5.00	\$ 551,630	\$ 6.35	\$ 700,570
4.4 -	4.3	(1) 3/8" FHS7 Steel (ENS-336 to ENS-464)	75 398	I F	\$ 0.47	\$ 35.437	\$ 5.00	\$ 376,990	\$ 5.47	\$ 412.427
4.5 115kV - (1) 954kcmil 54/7 ACSS "Cardinal" (ENS-336 to ENS-464)		(2) 5/6 2/15/ 5/62/ (2/15 555 /6 2/15 /6/)								
4.6 (1) OPGW 36 Fiber AC-33/38/571 (ENS-336 to ENS-464)	-	11EW (1) 0EAkomil E4/7 ACSS "Cardinal" (ENS 226 to ENS 464)		15						·
4.7 (1) 3/8" EHS7 Steel (ENS-336 to ENS-464) 4.8 Remove Existing Conductor and Accessories 5.5 Mile \$ - \$ - \$ 5.00 \$ 75,000 \$ 30,000 \$ 75,000 \$ 30,000 \$ 75,000 \$ 30,000 \$ 75,000 \$ 30,000 \$ 75,000 \$ 30,000 \$ 75,000 \$ 30,000 \$ 75,000 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 12,000			41,380			,				
4.8 Remove Existing Conductor and Accessories 2.5 Mile \$ - \$ - \$ 30,000 \$ 75,000 \$ 30,000.00 \$ 75,000 \$ 30,000.00 \$ 75,000 \$ 30,000.00 \$ 75,000 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 12,000.00 \$ 12,000.00 \$ 12,000	4.6	(1) OPGW 36 Fiber AC-33/38/571 (ENS-336 to ENS-464)	-	LF						
4.9 Remove Existing OPGW and Accessories 2.5 Mile \$ - \$ 12,000 \$ 30,000 \$ 120,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 12,000.00 \$ 30,000 \$ 13,000 \$ 30,000 \$ 13,000 \$ 13,251 4 12,000.00 \$ 50,200 \$ 5,250.00 \$ 131,251 4 12,000.00 \$ 50,200 \$ 5,250.00 \$ 131,251 4 12,000.00 \$ 131,251 4 131,251 4 131,251 4 131,251 4 131,251 4		(1) 3/8" EHS7 Steel (ENS-336 to ENS-464)		LF	•					
4.10 Remove Existing OHSW and Accessories 2.5 Mile \$ - \$ - \$ 12,000 \$ 30,000 \$ 12,000.00 \$ 30,000 4.11 Rider Poles (50 Locations) 25 Set \$ 1,750 \$ 43,750 \$ 3,500 \$ 87,500 \$ 5,250.00 \$ 131,251 4.12 Rider Poles - Relocated 25 Set \$ - \$ - \$ 3,500 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 87,500 \$ 87,500 \$ 87,500 \$ 87,500 \$ 87,500 \$ 87,500 \$ 87,500 \$ 87,500 \$ 87,500	4.8	Remove Existing Conductor and Accessories		Mile	\$ -		\$ 30,000	\$ 75,000	\$ 30,000.00	\$ 75,000
4.11 Rider Poles (50 Locations) 25 Set \$ 1,750 \$ 43,750 \$ 87,500 \$ 5,250.00 \$ 131,251 4.12 Rider Poles - Relocated 25 Set \$ - \$ - \$ 3,500 \$ 87,500 \$ 35,000.00 \$ 87,500 TOTAL - CONDUCTOR, SHIELDWIRE, OPGW: \$ 1,564,842 \$ \$ 4,756,290 \$ 6,321,132 5.10 345kV Tangent (1-Group of 18-Bells Each Assembly) \$ 1,800 \$ 968,400 \$ 7.02 \$ 387,360 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,355,760 \$ 1,358,700 \$ 1,355,760 \$ 1,358,700 \$ 1,358,	4.9	Remove Existing OPGW and Accessories	2.5	Mile	\$ -	\$ -	\$ 12,000	\$ 30,000	\$ 12,000.00	\$ 30,000
4.12 Rider Poles - Relocated	4.10	Remove Existing OHSW and Accessories	2.5	Mile	\$ -	\$ -	\$ 12,000	\$ 30,000	\$ 12,000.00	\$ 30,000
Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample Sample S	4.11	Rider Poles (50 Locations)	25	Set	\$ 1,750	\$ 43,750	\$ 3,500	\$ 87,500	\$ 5,250.00	\$ 131,250
S. INSULATOR, FITTINGS, HARDWARE S. I. SASKY Tangent (1-Group of 18-Bells Each Assembly) S. I. SASKY Tangent (1-Group of 18-Bells Each Assembly) S. I. SASKY Tangent (1-Group of 18-Bells Each Assembly) S. I. SASKY Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKEMBLY S. I. SASKE	4.12	Rider Poles - Relocated	25	Set	\$ -	\$ -	\$ 3,500	\$ 87,500	\$ 3,500.00	\$ 87,500
5.1 345kV Tangent (1-Group of 18-Bells Each Assembly) 538 Assembly \$ 1,800 \$ 968,400 \$ 720 \$ 387,360 \$ 2,520 \$ 1,355,761 5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 78 Assembly \$ 900 \$ 70,200 \$ 560 \$ 43,680 \$ 1,460 \$ 113,881 5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 255 Assembly \$ 1,800 \$ 459,000 \$ 720 \$ 183,600 \$ 2,520 \$ 642,600 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 21 Assembly \$ 900 \$ 18,900 \$ 560 \$ 11,760 \$ 1,460 \$ 30,661 5.5 - - - - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - <td></td> <td></td> <td></td> <td></td> <td></td> <td>\$ 1,564,842</td> <td></td> <td>\$ 4,756,290</td> <td></td> <td>\$ 6,321,132</td>						\$ 1,564,842		\$ 4,756,290		\$ 6,321,132
5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 78 Assembly \$ 900 \$ 70,200 \$ 560 \$ 43,680 \$ 1,460 \$ 113,881 5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 255 Assembly \$ 1,800 \$ 459,000 \$ 720 \$ 183,600 \$ 2,520 \$ 642,600 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 21 Assembly \$ 900 \$ 18,900 \$ 11,760 \$ 1,460 \$ 30,661 5.5 Assembly \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <										
5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 255 Assembly \$ 1,800 \$ 459,000 \$ 720 \$ 183,600 \$ 2,520 \$ 642,600 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 21 Assembly \$ 900 \$ 18,900 \$ 560 \$ 11,760 \$ 1,460 \$ 30,660 5.5 Assembly \$ - \$ - \$ - \$ - \$ - \$ - 5.6 Assembly \$ - \$ - \$ - \$ - \$ - 5.7 OPGW Assembly - Tangent 110 Assembly \$ 200 \$ 22,000 \$ 150 \$ 16,500 \$ 350 \$ 38,500				<u>.</u>						
5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 21 Assembly \$ 900 \$ 18,900 \$ 560 \$ 11,760 \$ 30,661 5.5 Assembly \$ - \$ - \$ - \$ - \$ - \$ - 5.6 Assembly - Tangent \$ 200 \$ 22,000 \$ 150 \$ 16,500 \$ 38,500										
5.5 Assembly \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$				<u>.</u>						
5.6 Assembly \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$		115KV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	21		\$ 900		\$ 560			
5.7 OPGW Assembly - Tangent 110 Assembly \$ 200 \$ 22,000 \$ 150 \$ 16,500 \$ 350 \$ 38,500				<u>.</u>						
		OPGW Assembly - Tangent	110		\$ 200	_	\$ 150			
5.8 OPGW Assembly - Angle / DE 34 Assembly \$ 250 \$ 8,500 \$ 150 \$ 5,100 \$ 400 \$ 13,600	5.8	OPGW Assembly - langent OPGW Assembly - Angle / DE	34	Assembly						

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.9	OHSW Assembly - Tangent	61	Assembly	\$ 200		\$ 150			
5.10	OHSW Assembly - Angle / DE	24	Assembly	\$ 250	\$ 6,000	\$ 150		\$ 400	\$ 9,600
5.11	OPGW Splice Boxes	8	Assembly	\$ 1,746	-,	\$ 2,274			\$ 32,161
5.12	OPGW Splice & Test	8	EA	\$ 2,520		\$ 2,520			\$ 40,320
5.13	Spacer - Conductor	1,773	EA	\$ 50	\$ 88,650	\$ 35	\$ 62,055	\$ 85	\$ 150,705
5.14	Vibration Dampers - Conductor	1,596	EA	\$ 35	\$ 55,860	\$ 35	\$ 55,860	\$ 70	\$ 111,720
5.15	Shieldwire / OPGW Dampers, Misc. Fittings	293	EA	\$ 27		•	. ,		•
5.16	Guys, Anchors, and Accessories	-	EA	\$ 912		\$ 1,058		\$ 1,970	
5.17	Misc. materials (Signs and Markers)	19.9	Mile	\$ 770	,	\$ 1,006	\$ 20,019	\$ 1,776	· · · · · · · · · · · · · · · · · · ·
TOTAL - INSU	ILATORS, FITTINGS, HARDWARE:				\$ 1,767,073		\$ 847,291		\$ 2,614,365
C. Trans	smission Line Princetown to New Scotland				\$ 11,437,237		\$ 26,905,263		\$ 38,342,499
6. MOB/DEN	IOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 383,425	\$ 383,425	\$ 383,425	\$ 383,425
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 1,958,474	\$ 1,958,474	\$ 1,958,474	\$ 1,958,474
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 383,425	\$ 383,425	\$ 383,425	\$ 383,425
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 383,425	\$ 383,425	\$ 383,425	\$ 383,425
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 1,917,125	\$ 1,917,125	\$ 1,917,125	\$ 1,917,125
6.6	Lidar	1	LS	\$ -	\$ -	\$ 115,027	\$ 115,027	\$ 115,027	\$ 115,027
6.7	Geotech	20	Location	\$ -	\$ -	\$ 3,500	\$ 70,000	\$ 3,500	\$ 70,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 268,397	\$ 268,397	\$ 268,397	\$ 268,397
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs					,			
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 115,027	\$ 115,027	\$ 115,027	\$ 115,027
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ 215,000	\$ 215,000	\$ 215,000	\$ 215,000
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 2,477,000	\$ 2,477,000	\$ 2,477,000	\$ 2,477,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 914,979	\$ 914,979	\$ -	\$ -	\$ 914,979	\$ 914,979
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS	,	\$ -	\$ 38,342	\$ 38,342	\$ 38,342	
	B/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 914,979	,-	\$ 8,364,668	,-	\$ 9,279,647

NAT & NYPA - T026 - (Segment A, Base)

D. Rotterdam Substation - Install

Estimate Revision: 5 Total: \$ 54,572,999

NAT & NYPA - T026 -	(Segment A, I	Base)			
		Supply	Installation	Total	
D. Rotterdam Substation - Install					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,896,891	\$ 7,763,755	\$ 10,660,646	
2. SUBSTATION FOUNDATIONS	\$	2,443,003	\$ 2,616,200	\$ 5,059,203	
3. SUBSTATION STRUCTURES	\$	944,980	\$ 944,980	\$ 1,889,960	1
4. MAJOR EQUIPTMENT	\$	11,915,000	\$ 2,970,000	\$ 14,885,000	l
5. SMALL EQUIPTMENT / MATERIALS	\$	1,994,540	\$ 1,060,500	\$ 3,055,040	1
6. CONTROL HOUSE / PANELS	\$	2,927,500	\$ 1,477,500	\$ 4,405,000]
7. MISC ITEMS	\$	1,441,675	\$ 2,331,950	\$ 3,773,625	1
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,965,087	\$ 8,879,438	\$ 10,844,525	1
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -	0.09
SUBTOTAL:	\$	26,528,676	\$ 28,044,322	\$ 54,572,999	l
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -	0.0
TOTAL:	\$	26,528,676	\$ 28,044,322	\$ 54,572,999	

Item	Item Description	Estimated Quantity	Unit of Measure	Mat	terial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
D. Rotte	rdam Substation - Install										
1. SITE PREP/	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	7.4	ACRES	\$	-	\$ -	\$ 203,000	\$ 1,497,125	\$ 203,000	\$	1,497,125
1.2	Station stone within substation fence.	3,175	CY	\$	27	\$ 85,725	\$ 75	\$ 238,125	\$ 102	\$	323,850
1.3	Substation Fence	2,130	LF	\$	100	\$ 213,000	\$ 100	\$ 213,000	\$ 200	\$	426,000
1.4	Retaining Wall (1065' x 13')	1	LS	\$	406,755	\$ 406,755	\$ 925,345	\$ 925,345	\$ 1,332,100	\$	1,332,100
1.5	Compacted Fill (124,583cy Sand)	124,583	CY	\$	17	\$ 2,117,911	\$ 20	\$ 2,491,660	\$ 37	\$	4,609,571
1.6	Permanent Access Road - 20'-Wide (From Gordon RD)	2,100	LF	\$	35	\$ 73,500	\$ 285	\$ 598,500	\$ 320	\$	672,000
1.7	Natural Gas Transmission Line Relocation	1	LS	\$	-		\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$	1,800,000
1.8											
1.9											
1.10											
1.11											
1.12											
1.13											
1.14											
1.15											
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 2,896,891		\$ 7,763,755		\$	10,660,646
2. SUBSTATIO	N FOUNDATIONS										
2.1	345kV										
2.1a	Circuit Breaker Foundations	8	EA	\$	14,940	\$ 119,520	\$ 16,000		\$ 30,940		247,520
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$	-
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	32	EA	\$	26,145	\$ 836,640	\$ 28,000	\$ 896,000	\$ 54,145	_	1,732,640
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145		\$ 28,000		\$ 54,145	_	-
2.1e	Switch Stand Foundations	102	EA	\$	4,482	\$ 457,164	\$ 4,800		\$ 9,282	\$	946,764
2.1f	Station Service Transformer Stand Foundation	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282		9,282
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1h	Bus Support 1 Ph Foundations	42	EA	\$	4,482	\$ 188,244	\$ 4,800	· '	\$ 9,282	-	389,844
2.1j	Instrument Transformer Stand Foundations	33	EA	\$	4,482	\$ 147,906	\$ 4,800	\$ 158,400	\$ 9,282	\$	306,306

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1k	Arrester Stand Foundations	6	EA	\$ 4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1m	Wave Trap Stand Foundations	2	EA	\$ 4,482	\$ 8,964	\$ 4,800	\$ 9,600	\$ 9,282	\$ 18,564
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	1	EA	\$ 11,952	\$ 11,952	\$ 12,800	\$ 12,800	\$ 24,752	\$ 24,752
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 22,410	\$ 89,640	\$ 24,000	\$ 96,000	\$ 46,410	\$ 185,640
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	8	EA	\$ 3,735	\$ 29,880	\$ 4,000	\$ 32,000	\$ 7,735	\$ 61,880
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2j	Instrument Transformer Stand Foundations	9	EA	\$ 3,735	\$ 33,615	\$ 4,000	\$ 36,000	\$ 7,735	\$ 69,615
2.2k	Arrester Stand Foundations	3	EA	\$ 3,735	\$ 11,205	\$ 4,000	\$ 12,000	\$ 7,735	\$ 23,205
2.2m	Wave Trap Stand Foundations	1	EA	\$ 3,735	\$ 3,735	· · · · · · · · · · · · · · · · · · ·	\$ 4,000	\$ 7,735	\$ 7,735
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									-
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 16,434	\$ 65,736	,	\$ 70,400		\$ 136,136
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	4	EA	\$ 2,988	\$ 11,952	\$ 3,200	\$ 12,800	\$ 6,188	\$ 24,752
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ 11,552		\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	\$ -
2.3g 2.3h		0	EA	\$ 2,988	\$ -	,	\$ -	\$ 6,188	
	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3j			EA	7		7	,	,	
2.3k	Arrester Stand Foundations	6		ļ ·	1	· · · · · · · · · · · · · · · · · · ·	, ,,,,,	\$ 6,188 \$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	,	\$ -	\$ 3,200	\$ -	7 0,200	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations					4			
2.4a	345-230kV Transformer Foundation w/ Oil Containment	1	EA	\$ 97,110	\$ 97,110		\$ 104,000	\$ 201,110	
2.4b	345-115kV Transformer Foundation w/ Oil Containment	2	EA	\$ 74,700	\$ 149,400	\$ 80,000	\$ 160,000	\$ 154,700	\$ 309,400
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 97,110					
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229		\$ 5,600		\$ 10,829	
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
	TATION FOUNDATIONS				\$ 2,443,003		\$ 2,616,200		\$	5,059,203
	N STRUCTURES									
3.1	345kV									
3.1a	Substation A-Frame Structures - Stand alone	8	EA	\$ 37,000	\$ 296,000	\$ 37,000	\$ 296,000	\$ 74,000		592,000
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	 	-
3.1c	Switch Stands	17	EA	\$ 14,800	\$ 251,600		\$ 251,600	\$ 29,600	 	503,200
3.1d	Station Service Transformer Stand	1	EA	\$ 14,800	\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600		29,600
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
3.1f	Bus Support 1 Ph	42	EA	\$ 3,700	\$ 155,400	\$ 3,700	\$ 155,400	\$ 7,400		310,800
3.1g	Instrument Transformer Stand	33	EA	\$ 1,850	\$ 61,050	\$ 1,850	\$ 61,050	\$ 3,700	 	122,100
3.1h	Arrester Stand	6	EA	\$ 1,850	\$ 11,100	\$ 1,850	\$ 11,100	\$ 3,700	\$	22,200
3.1j	Wave Trap Stand	2	EA	\$ 7,400	\$ 14,800	\$ 7,400	\$ 14,800	\$ 14,800	\$	29,600
3.1k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.2	230kV									
3.2a	Substation A-Frame Structures - Stand alone	1	EA	\$ 33,300	\$ 33,300	\$ 33,300	\$ 33,300	\$ 66,600	\$	66,600
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2c	Switch Stands	2	EA	\$ 12,025	\$ 24,050	\$ 12,025	\$ 24,050	\$ 24,050	\$	48,100
3.2d	Station Service Transformer Stand	0	EA	\$ 12,025	\$ -	\$ 12,025	\$ -	\$ 24,050	\$	-
3.2e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
3.2f	Bus Support 1 Ph	0	EA	\$ 2,775	\$ -	\$ 2,775	\$ -	\$ 5,550	\$	_
3.2g	Instrument Transformer Stand	9	EA	\$ 1,295	\$ 11,655	\$ 1,295	\$ 11,655	\$ 2,590	 	23,310
3.2h	Arrester Stand	3	EA	\$ 1,295	\$ 3,885		\$ 3,885	\$ 2,590	_	7,770
3.2j	Wave Trap Stand	1	EA	\$ 5,550	\$ 5,550	\$ 5,550	\$ 5,550	\$ 11,100	Ś	11,100
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	5	-
			2.1	φ 0,5	<u> </u>	φ 0,.73	<u> </u>	• 12,550	Ť	
3.3	115kV									
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$ 18,500	\$ 37,000	\$ 18,500	\$ 37,000	\$ 37,000	\$	74,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$	-
3.3c	Switch Stands	2	EA	\$ 7,955	\$ 15,910	\$ 7,955	\$ 15,910	\$ 15,910	\$	31,820
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$	-
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$	-
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$	-
3.3g	Instrument Transformer Stand	6	EA	\$ 740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$	8,880
3.3h	Arrester Stand	6	EA	\$ 740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$	8,880
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$	-
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	+	-
	TATION STRUCTURES				\$ 944,980		\$ 944,980		\$	1,889,960
4. MAJOR EQU										
4.1	345kV									
4.1a	Circuit Breakers	8	EA	\$ 200,000	\$ 1,600,000		\$ 640,000	\$ 280,000	+	2,240,000
4.1b	Capacitor Banks	0		\$ -						-
4.1c	345 kV - 230 kV Auto Transformer	1	EA	\$ 3,400,000				\$ 4,150,000		4,150,000
4.1d	345 kV - 115 kV Auto Transformer	2	EA	\$ 3,400,000	\$ 6,800,000	\$ 750,000	\$ 1,500,000	\$ 4,150,000	\$	8,300,000
4.2	230kV									
4.2a	Circuit Breakers	1	EA	\$ 115,000				\$ 195,000	_	195,000
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.3	115kV									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
4.3a	Circuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAJOI	L R EQUIPTMENT				\$ 11,915,000		\$ 2,970,000		\$ 14,885,000
5. SMALL EQUI	PTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	2	EA	\$ 40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$ 110,000
5.1b	Disconnect Switches - 3ph w/ manual operator	17	EA	\$ 35,000	\$ 595,000	\$ 17,500	\$ 297,500	\$ 52,500	\$ 892,500
5.1c	VT'S	6	EA	\$ 25,000	\$ 150,000	\$ 12,000	\$ 72,000	\$ 37,000	\$ 222,000
5.1d	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.1e	CCVT'S	21	EA	\$ 13,000	\$ 273,000	\$ 8,000	\$ 168,000	\$ 21,000	\$ 441,000
5.1f	Arresters	15	EA	\$ 6,500	\$ 97,500	\$ 1,500	\$ 22,500	\$ 8,000	\$ 120,000
5.1g	Wave Traps	2	EA	\$ 13,000	\$ 26,000	\$ 8,000	\$ 16,000	\$ 21,000	\$ 42,000
	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$ 250,000
5.1j									
	230kV								
	Line Switches - 3ph w/ motor operator	1	EA	\$ 35,000	\$ 35,000		\$ 15,000	\$ 50,000	
	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 30,000	\$ 30,000		\$ 17,500	\$ 47,500	\$ 47,500
	VT'S	3	EA	\$ 13,000	\$ 39,000		\$ 24,000	\$ 21,000	\$ 63,000
	CT'S	3	EA	\$ 13,000	\$ 39,000		\$ 24,000	\$ 21,000	\$ 63,000
	CCVT'S	3	EA	\$ 10,000	\$ 30,000		\$ 18,000	\$ 16,000	\$ 48,000
	Arresters	6	EA	\$ 5,000	\$ 30,000		\$ 36,000	\$ 11,000	\$ 66,000
	Wave Traps	1	EA	\$ 13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
	Line Switches - 3ph w/ motor operator	2	EA	\$ 33,000	\$ 66,000	\$ 15,000	\$ 30,000	\$ 48,000	\$ 96,000
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
	VT'S	6	EA	\$ 13,000	\$ 78,000	, , , , , , , , , , , , , , , , , , , ,	\$ 48,000	\$ 21,000	
	CT'S	6	EA	\$ 13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
	CCVT'S	2	EA	\$ 8,000	\$ 16,000	\$ 8,000	\$ 16,000	\$ 16,000	\$ 32,000
	Arresters	12	EA	\$ 3,420	\$ 41,040		\$ 72,000	\$ 9,420	\$ 113,040
	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ 72,000	\$ -	\$ -
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3]	1 4363		EA .	-	-	-	-	÷ -	-
	EQUIPTMENT / MATERIALS				\$ 1,994,540		\$ 1,060,500		\$ 3,055,040
	DUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ 975,000	\$ 975,000	\$ 170,000	\$ 170,000	\$ 1,145,000	\$ 1,145,000
6.2	Protection and Telecom Equipment Panels	29	EA	\$ 35,000	\$ 1,015,000	\$ 10,000	\$ 290,000	\$ 45,000	\$ 1,305,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,000
	Control Cables	1	LS	\$ 472,500	\$ 472,500		\$ 472,500	\$ 945,000	\$ 945,000
	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
6.7 D	DC Distribution System	2	EA	\$	50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.8 Se	Security	1	EA	\$	7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
6.9 Fi	Fire Alarm	1	EA	\$	7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
6.10 G	Generator	1	EA	\$	100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
							·				-
TOTAL - CONTRO	OL HOUSE / PANELS / GENERATOR					\$ 2,927,500		\$ 1,477,500		\$	4,405,000
7. MISC ITEMS											
7.1 C	Conduit & Cable Trench System	1,950	LF	\$	185.00	\$ 360,750	\$ 170.00	\$ 331,500	\$ 355	\$	692,250
7.2 R	Rigid Bus, Fittings & Insulators	2,500	LF	\$	125.07	\$ 312,675	\$ 237.10	\$ 592,750	\$ 362	\$	905,425
7.3 Si	Strain Bus, Connectors & Insulators	2,000	LF	\$	39.30	\$ 78,600	\$ 53.35	\$ 106,700	\$ 93	\$	185,300
7.4 G	Grounding System	25,000	LF	\$	6.93	\$ 173,250	\$ 32.58	\$ 814,500	\$ 40	\$	987,750
7.5 St	Strain Bus Insulators - 345kV	48	EA	\$	2,000	\$ 96,000	\$ 1,050	\$ 50,400	\$ 3,050	\$	146,400
7.6 St	Strain Bus Insulators - 230kV	6	EA	\$	1,400	\$ 8,400	\$ 750	\$ 4,500	\$ 2,150	\$	12,900
7.7 St	Strain Bus Insulators - 115kV	12	EA	\$	1,000	\$ 12,000	\$ 550	\$ 6,600	\$ 1,550	\$	18,600
7.8 Lo	Low Voltage AC Station Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.9 S	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.10 C	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.11 N	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12											
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20											
TOTAL - MISC IT	TEMS					\$ 1,441,675		\$ 2,331,950		\$	3,773,625
	dam Substation - Install					\$ 24,563,589		\$ 19,164,885		\$	43,728,474
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					, , , , , ,					., .,
	Contractor Mobilization / Demobilization										
	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 437,285	\$ 437,285	\$ 437,285	\$	437,285
	Project Management, Material Handling & Amenities						,		,		•
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 2,233,580	\$ 2,233,580	\$ 2,233,580	\$	2,233,580
8.3 U	Utility PM and Project Oversite	1	LS			\$ -	\$ 437,285	\$ 437,285	\$ 437,285	\$	437,285
	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 437,285				437,285
 	Engineering										
8.5 D	Design Engineering	1	LS	\$	-	\$ -	\$ 3,498,278	\$ 3,498,278	\$ 3,498,278	\$	3,498,278
8.6 Li	LiDAR	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.7 G	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	Ś	14,000
	Surveying/Staking	1	Site	\$		\$ -	\$ 306,099			_	306,099
	Testing & Commissioning	1	Site	+	=	* 1	200,033	300,033	2 300,033	ļ -	300,033
	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 1,093,212	\$ 1,093,212	\$ 1,093,212	_	1,093,212

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	- :	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	- :	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$.	- :	\$ -	\$ 131,185	\$ 131,185	\$ 131,185	\$ 131,185
8.13	Real Estate Costs (New)	-	LS	\$.	- :	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$.	- :	\$ -	\$ 247,500	\$ 247,500	\$ 247,500	\$ 247,500
8.15	Legal Fees	-	LS	\$.	- :	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$.	- :	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$.	- :	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 1,965,0	087	\$ 1,965,087	\$ -	\$ -	\$ 1,965,087	\$ 1,965,087
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 43,728	\$ 43,728	\$ 43,728	\$ 43,728
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,965,087		\$ 8,879,438		\$ 10,844,525

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D. SS Rotterdam-Install

NAT & NYPA - T028 - (Segment A, Enhanced)

E. Rotterdam Substation - Removal

Estimate Revision: 5 Total: \$ 4,207,133

NAT & NYPA - T028 - (Segmen	nt A, Enhanced)		
	Supply	Installation	Total
E. Rotterdam Substation - Removal			
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	\$ 1,472,750	\$ 1,472,750
2. SUBSTATION FOUNDATIONS	\$ -	\$ 617,400	\$ 617,400
3. SUBSTATION STRUCTURES	\$ -	\$ 534,900	\$ 534,900
4. MAJOR EQUIPTMENT	\$ -	\$ 147,000	\$ 147,000
5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$ 169,500	\$ 169,500
6. CONTROL HOUSE / PANELS	\$ -	\$ 150,000	\$ 150,000
7. MISC ITEMS	\$ -	\$ 519,480	\$ 519,480
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -	\$ 596,103	\$ 596,103
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ -	\$ 4,207,133	\$ 4,207,133
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ -	\$ 4,207,133	\$ 4,207,133

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
E. Rotte	rdam Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	6.3	ACRES	\$ -	\$ -	\$ 203,000	\$ 1,268,750	\$ 203,000	\$ 1,268,750
1.2	Station stone within substation fence.	2,000	CY	\$ -	\$ -	\$ 102	\$ 204,000	\$ 102	\$ 204,000
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ 1,472,750		\$ 1,472,750
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2	230kV								
2.2a	Circuit Breaker Foundations	9	EA	\$ -	\$ -	\$ 7,200	\$ 64,800	\$ 7,200	\$ 64,800
2.2b	Capacitor Bank Foundations	2	EA	\$ -	\$ -		\$ 64,000	\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	1	EA	\$ -	\$ -	\$ 22,000	\$ 22,000	\$ 22,000	\$ 22,000
2.2d	Caisson DE Foundations (for DE A frame str stand alone) Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	
2.2u 2.2e	Switch Stand Foundations	15	EA	\$ -	\$ -	\$ 5,200	\$ 78,000	\$ 5,200	\$ 78,000
2.2f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ 78,000	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g 2.2h	Bus Support 1 Ph Foundations	59	EA	\$ -	\$ -	\$ 2,400	\$ 141,600	\$ 2,400	\$ 141,600
	Instrument Transformer Stand Foundations	15	EA	\$ -	\$ -	\$ 2,400	\$ 36,000	\$ 2,400	\$ 36,000
2.2j 2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ - \$ -	\$ 2,400	\$ 36,000	\$ 2,400	\$ 14,400
2.2K 2.2m		0	EA EA		\$ -	, , , , , ,			\$ 14,400
	Wave Trap Stand Foundations				T	•		·	•
2.2n 2.2p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2μ									
2.3	115kV								
2.3a		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Circuit Breaker Foundations								*
2.3b	Capacitor Bank Foundations Caisson DE Foundations (for DE A frame str stand alone)	0	EA EA		1			\$ - \$ -	\$ - \$ -
2.3c		0					\$ - \$ -		-
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0 3	EA		·		'		-
2.3e	Switch Stand Foundations		EA		<u> </u>	,	, ,,,,,	,	
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	3	EA	\$ -	\$ -	\$ 42,000	\$ 126,000	\$ 42,000	\$ 126,000
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
							,		
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								-	
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0		\$ -		\$ -	\$ -		\$ -
TOTAL - SUBS	TATION FOUNDATIONS				\$ -		\$ 617,400		\$ 617,400
3. SUBSTATIO	N STRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	1	EA	\$ -	\$ -	\$ 27,000	\$ 27,000	\$ 27,000	\$ 27,000
3.2b	Substation A-Frame Structures - Shared Column	5	EA	\$ -	\$ -	\$ 27,000	\$ 135,000	\$ 27,000	\$ 135,000
3.2c	Switch Stands	15	EA	\$ -	\$ -	\$ 9,750	\$ 146,250	\$ 9,750	\$ 146,250
3.2d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2e	Bus Support 3ph	4	EA	\$ -	\$ -	\$ 2,250	\$ 9,000	\$ 2,250	\$ 9,000
3.2f	Bus Support 1 Ph	59	EA	\$ -	\$ -	\$ 2,250	\$ 132,750	\$ 2,250	\$ 132,750
3.2g	Instrument Transformer Stand	15	EA	\$ -	\$ -	\$ 1,050	\$ 15,750	\$ 1,050	\$ 15,750
3.2h	Arrester Stand	6	EA	\$ -	\$ -	\$ 1,050	\$ 6,300	\$ 1,050	\$ 6,300
3.2j	Wave Trap Stand	3	EA	\$ -	\$ -	\$ 4,500	\$ 13,500	\$ 4,500	\$ 13,500
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ 30,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	3	EA	\$ -	\$ -	\$ 6,450	\$ 19,350	\$ 6,450	\$ 19,350
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION STRUCTURES				\$ -		\$ 534,900		\$ 534,900
4. MAJOR EQU					*		7 33 1,533		7 00 ,,000
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	9	EA	\$ -	\$ -	\$ 7,000	\$ 63,000	\$ 7,000	\$ 63,000
4.2b	Capacitor Banks	2	EA	\$ -	\$ -	\$ 42,000	\$ 84,000	\$ 42,000	\$ 84,000
	· ·					,,,,,	. ,,,,,,,	,	
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				<u> </u>					
TOTAL - MAIO	DR EQUIPTMENT				\$ -		\$ 147,000		\$ 147,000
	IPTMENT / MATERIALS				,		7 147,000		Ţ 147,000
5.1	345kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	1	TOTAL
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$	-
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$	-
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$	-
5.1f	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$	-
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$	-
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.1j										
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$	16,500
5.2b	Disconnect Switches - 3ph w/ manual operator	12	EA	\$ -	\$ -	\$ 5,500	\$ 66,000	\$ 5,500	\$	66,000
5.2c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.2e	CCVT'S	8	EA	\$ -	\$ -	\$ 1,500	\$ 12,000	\$ 1,500	\$	12,000
5.2f	Arresters	15	EA	\$ -	\$ -	\$ 2,500	\$ 37,500	\$ 2,500	\$	37,500
5.2g	Wave Traps	3	EA	\$ -	\$ -	\$ 2,500	\$ 7,500	\$ 2,500	\$	7,500
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.2j										
										,
5.3	115kV									
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3b	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$	16,500
5.3c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3e	CCVT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3f	Arresters	9	EA	\$ -	\$ -	\$ 1,500	\$ 13,500	\$ 1,500	\$	13,500
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 169,500		\$	169,500
	OUSE / PANELS / GENERATOR				7		7 210,000		*	
6.1	CONTROL HOUSE	1	EA	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$	150,000
6.2	PANELS	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.4	Protection and Telecom Equipment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ 150,000		\$	150,000
7. MISC ITEMS										
7.1	Conduit & Cable Trench System	1	LS	\$ -	\$ -	\$ 42,000.00	\$ 42,000	\$ 42,000	\$	42,000
7.2	Rigid Bus, Fittings & Insulators	3,200	LF	\$ -	\$ -	\$ 126.25	\$ 404,000	\$ 126	\$	404,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipmo Supply Rate	ent	Labor & Equipment Cost	Total Unit Rate		TOTAL
7.3	Strain Bus, Connectors & Insulators	800	LF	\$ -	\$ -	\$ 39	0.35	\$ 31,480	\$ 39	\$	31,480
7.4	Grounding System	1	LS	\$ -	\$ -	\$ 42,000	0.00	\$ 42,000	\$ 42,000	\$	42,000
7.5											
7.6											
7.7											
7.8											
7.9											
7.10											
7.11											
7.12											
7.13											
7.14											
7.15											
TOTAL - MISC	ITEMS				\$ -			\$ 519,480		\$	519,480
E. Rotter	rdam Substation - Removal				\$ -			\$ 3,611,030		\$	3,611,030
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 36,	110	\$ 36,110	\$ 36,110	\$	36,110
	Project Management, Material Handling & Amenities										
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 184,	446	\$ 184,446	\$ 184,446	\$	184,446
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 36,	110	\$ 36,110	\$ 36,110	\$	36,110
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 36,	110	\$ 36,110	\$ 36,110	\$	36,110
	Engineering					,		,	· , , , , , , , , , , , , , , , , , , ,		
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 288,	882	\$ 288,882	\$ 288,882	Ś	288,882
8.6	LiDAR	-	LS	\$ -	\$ -		_	\$ -	\$ -	\$	
8.7	Geotech	-	EA	\$ -	\$ -	-	\rightarrow	\$ -	\$ 3,500	\$	
8.8	Surveying/Staking	-	Site	\$ -	\$ -	· ·	-	\$ -	\$ 25,277	<u> </u>	_
	Testing & Commissioning			T	-			*	+,	_	
8.9	Testing & Commissioning of T-Line and Equipment	_	LS	\$ -	\$ -	\$ 90.	276	\$ -	\$ 90,276	Ś	
	Permitting and Additional Costs			T	-	,		*	7 77,2.1	-	
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	Ś	-	\$ -	\$ -	Ś	
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	1	-	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 10,	_	\$ 10,833	\$ 10,833	\$	10,833
8.13	Real Estate Costs (New)		LS	\$ -	\$ -	-	_	\$ -	\$ -	\$	-
8.14	Real Estate Costs (New)	_	LS	\$ -	\$ -		_	\$ -	\$ -	Ś	
8.15	Legal Fees		LS	\$ -	\$ -		\rightarrow	\$ - \$ -	\$ -	Ś	
8.16	Allowance for Funds Used During Construction (AFUDC)		LS	\$ -	\$ -	· .		\$ -	\$ -	\$	
8.17	- moranee is runas osca buring construction (Al obe)		LS	\$ -	\$ -	-	-	\$ -	\$ -	\$	
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	-	\rightarrow	\$ - \$ -	\$ -	Ś	
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS	· -	\$ -	T		\$ 3,611	\$ 3,611	\$	3,611
	rees for permiss, meading roadway, ramoad, building or other local permits				\$ -	, J	~++	\$ 596,103	9 3,011	ļ ,	596,103

Estimate Revision: 5 Total: \$ 2,639,615

NAT & NYPA - T028 - (Segmen	nt A, E	nhanced)		
		Supply	Installation	Total
F. Edic Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,025	\$ 5,625	\$ 7,650
2. SUBSTATION FOUNDATIONS	\$	100,098	\$ 107,200	\$ 207,298
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$ 88,800
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$ 280,000
5. SMALL EQUIPTMENT / MATERIALS	\$	280,000	\$ 133,500	\$ 413,500
6. CONTROL HOUSE / PANELS	\$	173,850	\$ 98,850	\$ 272,700
7. MISC ITEMS	\$	339,357	\$ 507,880	\$ 847,237
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	91,178	\$ 431,251	\$ 522,430
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,230,908	\$ 1,408,706	\$ 2,639,615
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,230,908	\$ 1,408,706	\$ 2,639,615

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	I Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
F. Edic S	ubstation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$	27	\$ 2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	0	LF	\$	100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	PREP/ GRADING/ FENCING / CIVIL					\$ 2,025		\$ 5,625		\$ 7,650
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	1	EA	\$	14,940	\$ 14,940	\$ 16,000	\$ 16,000	\$ 30,940	\$ 30,940
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	9	EA	\$	4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1k	Arrester Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,282
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$	3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -

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F. Edic Substation - Install

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735		\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735		\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735		\$ 4,000	\$ -		\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735		\$ 4,000		\$ 7,735	
2.2n 2.2p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434		\$ 17,600	\$ -	\$ 34,034	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434		\$ 17,600			\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988		\$ 3,200			\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988		\$ 3,200	\$ -		\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988		\$ 3,200			\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988		\$ 3,200	\$ -		\$ - \$ -
2.3j 2.3k	Instrument Transformer Stand Foundations Arrester Stand Foundations	0	EA EA	\$ 2,988 \$ 2,988		\$ 3,200 \$ 3,200	\$ - \$ -	\$ 6,188 \$ 6,188	\$ - \$ -
2.3K 2.3m	Wave Trap Stand Foundations	0	EA EA	\$ 2,988		\$ 3,200	\$ -	\$ 6,188	\$ -
2.3m	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations				_				•
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110		\$ 104,000	\$ -		\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700 \$ -		\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c 2.4d	230kV-115kV Transformer Foundation w/ Oil Containment 115kV-69kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.40	113KV-03KV Hansiothier Foundation wy on Containment	0	LA	,	-	· -		· -	<u>, </u>
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194		\$ 81,600	\$ -	\$ 157,794	
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b	60' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c	50' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION FOUNDATIONS				\$ 100,098		\$ 107,200		\$ 207,298
	N STRUCTURES								
3.1	345kV				·				
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000		\$ 37,000		\$ 74,000	
3.1b	Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ 37,000 \$ 14,800		\$ 37,000	\$ -	\$ 74,000	\$ -
3.1c	ISWITCH STANDS	1			\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$ 29,600 \$ -
					ė	¢ 14.900	ć		
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800		\$ 14,800 \$	\$ -	\$ 29,600	
3.1d 3.1e	Station Service Transformer Stand Bus Support 3ph	0	EA EA	\$ 14,800	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d 3.1e 3.1f	Station Service Transformer Stand	0	EA	\$ 14,800 \$ - \$ 3,700	\$ -	\$ - \$ 3,700	\$ -	\$ - \$ 7,400	\$ - \$ -
3.1d 3.1e	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0	EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ 16,650	\$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ 16,650	\$ - \$ 7,400 \$ 3,700	\$ - \$ -
3.1d 3.1e 3.1f 3.1g	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 9	EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ 16,650 \$ 5,550	\$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ 16,650	\$ - \$ 7,400 \$ 3,700	\$ - \$ - \$ 33,300
3.1d 3.1e 3.1f 3.1g 3.1h	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0 9	EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ 16,650 \$ 5,550 \$ 7,400	\$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ 16,650 \$ 5,550	\$ - \$ 7,400 \$ 3,700 \$ 3,700	\$ - \$ - \$ 33,300 \$ 11,100
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures	0 0 0 9 3	EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ 16,650 \$ 5,550 \$ 7,400	\$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ 16,650 \$ 5,550 \$ 7,400	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800	\$ - \$ - \$ 33,300 \$ 11,100 \$ 14,800
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV	0 0 0 9 9 3 1 0	EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ -	\$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950	\$ - \$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone	0 0 0 9 3 1 0	EA EA EA EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ -	\$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600	\$ - \$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0 0 0 9 9 3 1 0	EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ -	\$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600	\$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone	0 0 0 9 3 1 0	EA EA EA EA EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ -	\$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600	\$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ - \$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 0 0 9 3 3 1 0	EA EA EA EA EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050	\$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 0 0 9 3 1 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ 12,025	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050	\$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ - \$ - \$ - \$ 5 - \$ 5 - \$ 5 - \$ 5 -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2c 3.2d 3.2c 3.2d 3.2c 3.2d 3.2e	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 9 3 1 0 0 0 0 0 0 0	EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ - \$ 5,550 \$ 2,590	\$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ - \$ - \$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ - \$ 5 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2d 3.2c 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.2d 3.d 3.d 3.d 3.d 3.d 3.d 3.d 3.	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0 9 9 3 1 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295 \$ 1,295	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ \$ 2,775 \$ 1,295 \$ 1,295	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ -	\$ \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ \$ 5,550 \$ 2,590	\$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2c 3.2d 3.2c 3.2d 3.2c 3.2d 3.2e	Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 9 3 1 0 0 0 0 0 0 0	EA	\$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295	\$ - \$ 16,650 \$ 5,550 \$ 7,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295	\$ - S - S - S - S - S - S - S - S - S -	\$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ - \$ 5,550 \$ 2,590	\$ - \$ 33,300 \$ 11,100 \$ 14,800 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV									
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$	18,500		\$ 18,500	\$ -	\$ 37,000	
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500		\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$	7,955		\$ 7,955		\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$	7,955		\$ 7,955		\$ 15,910	
3.3e	Bus Support 3ph	0	EA	\$	3,330			\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$	1,850		\$ 1,850		\$ 3,700	
3.3g	Instrument Transformer Stand	0	EA	\$	740		\$ 740	\$ -		\$ -
3.3h	Arrester Stand	0	EA	\$			\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$	3,700	т	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TO A CTUATURE							4		
	TATION STRUCTURES					\$ 44,400		\$ 44,400		\$ 88,800
4. MAJOR EQU										
4.1	345kV									
4.1a	Circuit Breakers	1	EA	\$	200,000		\$ 80,000			\$ 280,000
4.1b	Capacitor Banks	0	EA	\$:	\$ 80,000	\$ -		\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$			\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV		F.*	ć	115 000	ć	ć 00.000	ć	ć 40F.000	*
4.2a	Circuit Breakers	0	EA FA	\$	115,000	7	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	AAFIA.									
4.3	115kV				52.000	A	4 50,000	^	4 442.000	A
4.3a	Circuit Breakers	0	EA	\$	52,000	т	\$ 60,000 \$ 60,000	\$ - \$ -	\$ 112,000 \$ 60,000	\$ - \$ -
4.3b	Capacitor Banks	0	EA	\$		\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL MAIO	R EQUIPTMENT					\$ 200.000		\$ 80,000		\$ 280,000
						\$ 200,000		\$ 80,000		\$ 280,000
5.1	IPTMENT / MATERIALS 345kV									
		1	ГА	Ś	40,000	ć 40.000	\$ 15.000	\$ 15.000	\$ 55,000	¢ 55,000
5.1a 5.1b	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	1	EA EA	\$	40,000 35,000		7,	T,	\$ 52,500	\$ 55,000 \$ 52,500
5.1c	VT'S	3	EA	\$			\$ 17,500 \$ 12,000	\$ 17,500 \$ 36,000	\$ 37,000	\$ 111,000
5.1d	CT'S	3	EA	\$	13,000			\$ 24,000		\$ 63,000
5.1e	CCVT'S	3	EA	\$	13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1e 5.1f	Arresters		EA	\$	6,500		\$ 1,500	\$ 24,000	\$ 21,000	\$ 48,000
5.1g	Wave Traps	1	EA	\$	13,000		\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
5.1g 5.1h	Station Service Transformers	0	EA	\$	200,000		\$ 50,000	\$ 8,000	\$ 250,000	\$ 21,000
5.1j	Station Service Hansformers	0	EA	13	200,000	· -	\$ 30,000	· -	3 230,000	-
3.1]										
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	Ś	35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	30,000		\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$	13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$	13,000		\$ 8,000	\$ -		\$ -
5.2e	CCVT'S	0	EA	\$	10,000		\$ 6,000		\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$			\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$	13,000		\$ 8,000	\$ -	. ,	\$ -
5.2h	Station Service Transformers	0	EA	\$			\$ -	\$ -	\$ -	\$ -
5.2j	Station Service mansionners		Σ,	+		·	Ÿ	Ÿ	Ÿ	¥
٥.٤,				T						
5.3	115kV									
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$	33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	28,000	т		\$ -		\$ -
	VT'S	0		Ś	13,000		\$ 8,000		\$ 21,000	
	CT'S	0	EA	\$	13,000		\$ 8,000		\$ 21,000	
5.3e	CCVT'S	0		\$	8,000		\$ 8,000		\$ 16,000	
5.3f	Arresters	0		\$	3,420		\$ 6,000		\$ 9,420	
5.3g	Wave Traps	0		\$				\$ -		\$ -
5.3h	Station Service Transformers	0	EA	\$				\$ -		\$ -
5.3j	Fuses	0	EA	\$			\$ -	\$ -		\$ -
5.5)	1.000	0	LA	+	+	*	· -	*	*	*
	L EQUIPTMENT / MATERIALS									
TOTAL - SMIAL						\$ 280,000		\$ 133,500		\$ 413,500

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	CONTROL HOUSE	0	EA	\$ 551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$ -
	Protection and Telecom Equipment Panels	3	EA	\$ 35,000	\$ 105,000			\$ 45,000	
	125VDC Batteries	0	EA	\$ 75,000	\$ -			\$ 100,000	
6.4	Control Cables	1	LS	\$ 68,850	\$ 68,850			\$ 137,700	
	SCADA and Communications	0	EA	\$ -		\$ -		\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ 50,000				\$ 150,000	
	DC Distribution System	0	EA	\$ 50,000				\$ 150,000	
	Security	0	EA	\$ 7,500	\$ -		·		\$ -
	Fire Alarm	0	EA	\$ 7,500	\$ -		·	\$ 15,000	
6.10	Generator	0	EA	\$ 100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
	ROL HOUSE / PANELS / GENERATOR				\$ 173,850		\$ 98,850		\$ 272,700
7. MISC ITEMS									
7.1	Conduit & Cable Trench System	800	LF	\$ 185.00	,	•	,	\$ 355	
7.2	Rigid Bus, Fittings & Insulators	0	L.S.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7.3	Strain Bus, Connectors & Insulators	2,500	LF		\$ 98,250	-		•	\$ 231,625
	Grounding System	1	L.S.	\$ 10,395.00	,		. , ,	\$ 83,700	\$ 83,700
7.5	Strain Bus Insulators - 345kV	24	EA	\$ 2,000	\$ 48,000	\$ 1,050		\$ 3,050	\$ 73,200
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400			·	\$ 2,150	
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$ -
7.8	Low Voltage AC Station Service	0	LS	\$ 50,000	\$ -		·	\$ 125,000	
7.9	SSVT Service	0	LS	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	\$ -
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 14,000	\$ 14,000	\$ 70,000	\$ 70,000	\$ 84,000	\$ 84,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 20,712	\$ 20,712	\$ 70,000	\$ 70,000	\$ 90,712	\$ 90,712
7.12									
7.13									
7.14									
7.15									
7.16									
7.17									
7.18									
7.19									
7.20									
7.21									
7.22									
7.23									
7.24									
7.25									
TOTAL - MISC	ITEMS				\$ 339,357		\$ 507,880		\$ 847,237
F. Edic Su	ubstation - Install				\$ 1,139,730		\$ 977,455		\$ 2,117,185
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 21,172	\$ 21,172	\$ 21,172	\$ 21,172
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 108,142	\$ 108,142	\$ 108,142	\$ 108,142
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 21,172		\$ 21,172	
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 21,172	\$ 21,172	\$ 21,172	\$ 21,172
	Engineering					A			A
8.5	Design Engineering	1	LS	\$ -	\$ -			\$ 169,375	
8.6	LiDAR	-	LS	-			·		\$ -
	Geotech	4	EA					\$ 3,500	
	Surveying/Staking	1	Site	\$ -	\$ -	\$ 14,820	\$ 14,820	\$ 14,820	\$ 14,820
	Testing & Commissioning		1.0	ļ. —	ć	ć 53.000	ć 53,000	ć 53.000	ć 53.000
	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 52,930	\$ 52,930	\$ 52,930	\$ 52,930
	Permitting and Additional Costs		1.0	ļ. —	ć	ć	,	ć	
	Environmental Licensing & Permitting Costs	-	LS	-			·		\$ -
	Environmental Mitigation	-	LS		\$ -				\$ -
	Warranties / LOC's	1	LS			\$ 6,352			
8.13	Real Estate Costs (New)	-	LS		\$ - \$ -				\$ - \$ -
0.44									
	Real Estate Costs (Incumbent Utility) Legal Fees	-	LS LS		\$ -				\$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply F	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 91,	178	\$ 91,178	\$ -	\$ -	\$ 91,178	\$ 91,178
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 2,117	\$ 2,117	\$ 2,117	\$ 2,117
TOTAL - M	DB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 91,178		\$ 431,251		\$ 522,430

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F. SS Edic-Install

G. Edic Substation - Removal

Estimate Revision: 5 Total: \$ 41,616

NAT & NYPA - T028 - (Segm	nent A, Enhanced)			
	Supply	/	Installation	Total
G. Edic Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ 14,000	\$ 14,000
3. SUBSTATION STRUCTURES	\$	-	\$ 6,750	\$ 6,750
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 4,500	\$ 4,500
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$ -
7. MISC ITEMS	\$	-	\$ -	\$ 10,500
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 5,866	\$ 5,866
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	-	\$ 31,116	\$ 41,616
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$		\$ 31,116	\$ 41,616

Descri	ption of	Wo	rk:
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Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate Cost		Total Unit Rate	TOTAL
ubstation - Removal								
GRADING/ FENCING / CIVIL								
Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
								İ
								İ
				\$ -		\$ -		\$ -
Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 14,000	\$ 14,000	\$ 14,000	\$ 14,000
Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0		\$ -	\$ -		\$ -	\$ -	\$ -
Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Circuit Breaker Foundations		EA	\$ -	\$ -				
Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
	0	EA	\$ -	\$ -				
	0	EA	\$ -	\$ -				
	0	EA	\$ -	\$ -		·	\$ 5,200	•
Station Service Transformer Stand Foundation	0		\$ -			\$ -	\$ -	\$ -
Bus Support 3ph Foundations	0	EA	\$ -	Ś -	\$ -	Ś -	\$ -	\$ -
	Ubstation - Removal RADING/FENCING / CIVIL Site Works including clearing, sediment controls, rough grading, and final grading. Station stone within substation fence. Substation Fence REP/ GRADING/ FENCING / CIVIL I FOUNDATIONS 345kV Circuit Breaker Foundations Cajsson DE Foundations (for DE A frame str stand alone) Caisson DE Foundations (for DE A frame str shared column) Switch Stand Foundations Station Service Transformer Stand Foundation Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations Mave Trap Stand Foundations Wave Trap Stand Foundations Misc. Structure Foundations Cajsson DE Foundations Misc. Structure Foundations Cajsson DE Foundations Cajson DE Foundations Misc. Structure Foundations Cajson DE Foundations Cajson DE Foundations Misc. Structure Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations Cajson DE Foundations	Ubstation - Removal RADING/ FENCING / CIVIL Site Works including clearing, sediment controls, rough grading, and final grading. Station stone within substation fence. O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Substation Fence O Station Fence O Substation Fence O Substation Fence O Station Fence O Station Fence O Substation Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Substation Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O Station Fence O	ubstation - Removal RRADING/ FENCING / CIVIL STRADING/ FENCING, Sediment controls, rough grading, and final grading. O ACRES Station stone within substation fence. O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence O LF Substation Fence Substation Fence Substation Fence Substation Fence Substation Fence Substation Fence Substation Fence O LEA Caisson DE Foundations O EA Suitch Stand Foundations O EA Sustich Sand Foundations O EA Sustich Sence Transformer Stand Foundation O EA Sustypopt 3ph Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer Stand Foundations O EA Instrument Transformer St	SRADING/FENCING / CVIU. Site Works including clearing, sediment controls, rough grading, and final grading. Station stone within substation fence. O CY \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence O LF \$ Substation Fence 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Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Mach	Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Machine Mach	Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Machinary Mach	Washadion - Removal

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400		\$ 2,400	
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV			_	_	4		1	
	Circuit Breaker Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str shared column)	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$ -
	Switch Stand Foundations	0		\$ -	\$ -			\$ 5,200	
	Fuse Stand Foundations	0	EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	Bus Support 3ph Foundations	0	EA EA	\$ - \$ -	\$ - \$ -		<u> </u>	\$ - \$ -	\$ -
	Bus Support 1 Ph Foundations		EA	т		7	17.	-	•
	Instrument Transformer Stand Foundations Arrester Stand Foundations	0	EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	Wave Trap Stand Foundations	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	-
	Station Service Foundations	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$ -
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	INISC. Structure i outidations	0	LA	· -	· -	-	,	· -	· -
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	Š -	\$ -	\$ -
2.40	113KV OSKV Transformer Foundation W/ On containment	•	LA.	7	7	,	Ť	Ÿ	-
2.5	Control House Foundations / Pad								
	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		-							
2.6	Lightning Mast Foundations								
	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION FOUNDATIONS				\$ -		\$ 14,000		\$ 14,000
3. SUBSTATION									
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Station Service Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	3	EA	\$ -	\$ -	\$ 2,250	\$ 6,750		\$ 6,750
	Instrument Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ - \$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
		0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA EA		\$ -	\$ 27,000		\$ 27,000	
	Switch Stands	0		\$ -	\$ -		-	\$ 27,000	
	Station Service Transformer Stand	0		\$ -			\$ -	\$ 9,730	
	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 1 Ph	0		\$ -		\$ 2,250		\$ 2,250	
	Instrument Transformer Stand	0		\$ -		\$ 1,050		\$ 1,050	
	Arrester Stand	0		\$ -	\$ -			\$ 1,050	
	Wave Trap Stand	0		\$ -	\$ -	\$ 4,500		\$ 4,500	
					•				
	Misc. Structures	l n	I FA	S -	5 -	IS -	S -	5 -	5 -
	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION STRUCTURES				\$ -		\$ 6,750		\$ 6,750
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV							1	
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV			4	4	4	4	4	4
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL \$4410	D FOLUDTA (FAIT				A		<u> </u>		A
	R EQUIPTMENT				\$ -		\$ -		\$ -
	PTMENT / MATERIALS								
5.1	345kV		FA.	ć	ć	ć 5.500	ć	ć 5.500	A
5.1a	Line Switches - 3ph w/ motor operator	0		\$ -			\$ -	\$ 5,500	
5.1b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500		\$ 5,500	
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ - \$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ - \$ -	\$ -	\$ 2,500	Ψ	\$ 2,500	\$ -
5.1f	Arresters	3	EA		\$ - \$ -	\$ 1,500	\$ 4,500	\$ 1,500	
5.1g	Wave Traps	0	EA	\$ -	'	\$ 2,500	\$ -	\$ 2,500	
5.1h	Station Service Transformers	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
5.1j		U	EA	\$ -	\$ -	\$ -	\$ -	\$ -	, -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	
5.2c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2u 5.2e	CCVT'S	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	
5.2e 5.2f	Arresters	0		\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	
5.2g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ -	\$ -
5.2j	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2			LA	7	7	,	Ÿ	Ÿ	•
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.3c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	CT'S	0		\$ -	\$ -		\$ -		\$ -
	CCVT'S	0		\$ -	\$ -		\$ -		\$ -
	Arresters	0		\$ -	\$ -			\$ 1,500	
	Wave Traps	0		\$ -			\$ -		\$ -
	Station Service Transformers	0		\$ -			\$ -		\$ -
	Fuses	0		\$ -		\$ -	\$ -		\$ -
,		•							
TOTAL - SMAL	EQUIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
						•			D 21 -£(5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	Š -	š -	\$ -	\$ -
				*	*	7	*	7	*
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS					Ÿ		7		7
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	¢ _
	·		LS	\$ -		\$ 10,500.00		\$ 10,500	
	Rigid Bus, Fittings & Insulators	1		'	\$ - \$ -				
	Strain Bus, Connectors & Insulators	0	EA	'	т	\$ 39.35		\$ 39	
7.4	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 10,500		\$ 10,500
C Ed:- C	ubstation Demonal								
	ubstation - Removal				\$ -		\$ 35,750		\$ 35,750
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 358	\$ 358	\$ 358	\$ 358
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 1,826	\$ 1,826	\$ 1,826	\$ 1,826
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 358	\$ 358	\$ 358	\$ 358
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 358	\$ 358	\$ 358	\$ 358
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 2,860	\$ 2,860	\$ 2,860	\$ 2,860
	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Surveying/Staking	-	Site	\$ -	\$ -	\$ 250	\$ -		\$ -
	Testing & Commissioning			·		. 250	·	. 250	
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 894	\$ -	\$ 894	\$ -
	Permitting and Additional Costs			· ·	· ·	- 334	· ·	- 354	-
	Environmental Licensing & Permitting Costs		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Licensing & Permitting Costs Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	т	\$ -
			LS		\$ -	\$ -		\$ 107	•
	Warranties / LOC's	1		'			7		
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 36		\$ 36	
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 5,866		\$ 5,866

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G. SS Edic-Removal

H. New Scotland Substation - Install

Estimate Revision: 5 Total: \$ 6,443,406

NAT & NYPA - T028 - (Segme	NAT & NYPA - T028 - (Segment A, Enhanced)										
	Supply			Installation		Total					
H. New Scotland Substation - Install											
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	4,050	\$	11,250	\$	15,300					
2. SUBSTATION FOUNDATIONS	\$	406,368	\$	435,200	\$	841,568					
3. SUBSTATION STRUCTURES	\$	199,800	\$	199,800	\$	399,600					
4. MAJOR EQUIPTMENT	\$	600,000	\$	240,000	\$	840,000					
5. SMALL EQUIPTMENT / MATERIALS	\$	353,000	\$	192,500	\$	545,500					
6. CONTROL HOUSE / PANELS	\$	726,650	\$	500,400	\$	1,227,050					
7. MISC ITEMS	\$	525,680	\$	788,055	\$	1,313,735					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	225,244	\$	1,035,409	\$	1,260,653					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-					
SUBTOTAL:	\$	3,040,792	\$	3,402,614	\$	6,443,406					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	\$	3,040,792	\$	3,402,614	\$	6,443,406					

Description of Wo	rk:	
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Suppl	y Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
H. New	Scotland Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	150	CY	\$	27	\$ 4,050	\$ 75	\$ 11,250	\$ 102	\$ 15,300
1.3	Substation Fence	0	LF	\$	100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4	Permanent Access Road - 20'-Wide (From Gordon RD)	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
	TOTAL - SITE PREP/ GRADING/ FENCING / CIVIL					\$ 4,050		\$ 11,250		\$ 15,300
	N FOUNDATIONS									
2.1	345kV	_								4
2.1a	Circuit Breaker Foundations	3	EA		14,940	\$ 44,820			\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA		6,025		\$ 60,000		\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA		26,145	. ,	,		\$ 54,145	.,
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA EA		26,145	\$ - \$ 107,568	\$ 28,000		\$ 54,145 \$ 9,282	
2.1e	Switch Stand Foundations	24			4,482					
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800		7 0,202	
2.1g	Bus Support 3ph Foundations	0	EA	T		\$ -	· ·	\$ -	\$ -	\$ -
2.1h 2.1j	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	15 12	EA EA		4,482 4,482	\$ 67,230 \$ 53,784			\$ 9,282 \$ 9,282	
		3	EA	T	4,482	\$ 33,784			\$ 9,282	
2.1k 2.1m	Arrester Stand Foundations Wave Trap Stand Foundations	1	EA EA	7	4,482	\$ 13,446			\$ 9,282	
2.1m	Misc. Structure Foundations	0	EA	Ś		\$ 4,462	\$ 4,800	\$ 4,800	\$ 3,282	\$ 9,262
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p		0	EA	,	<u> </u>	, -	, -	-	, -	-
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$ 1	1,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA		14.820	\$ -	\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	+ '	22,410	\$ -	\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str stand alone) Caisson DE Foundations (for DE A frame str shared column)	0	EA	7	22,410	Y	\$ 24,000		\$ 46,410	
2.2u	Switch Stand Foundations	0	EA	+	3,735		\$ 4,000		\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA		3,735		\$ 4,000	\$ -	\$ 7,735	
			2,	1.7	-,	1 7	7,000	1 7	+ 7,755	7

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment	Labor & Equipment	Total Unit Rate	TOTAL
						Supply Rate	Cost		-
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	•	\$ -
2.2p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	AAPIN								
2.3 2.3a	115kV Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -		\$ -	\$ 69,615	
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -		š -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 34,034	<u> </u>
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ - \$ -	\$ 6,188	
2.3n 2.3p	Station Service Foundations Misc. Structure Foundations	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	•	\$ - \$ -
2.5p	Misc. Structure Foundations	0	EA	\$ -	, -	ş -	ş -	, -	· -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	Ś -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -		\$ -	\$ 154,700	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -		\$ -	\$ 157,794	
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	2	EA	\$ 5,229	\$ 10,458	\$ 5,600	\$ 11,200	\$ 10,829	\$ 21,658
2.6b	70 Egitting Heat Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ 406,368		\$ 435,200		\$ 841,568
	N STRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	1	EA	\$ 37,000	\$ 37,000	1 ,	\$ 37,000	\$ 74,000	· · · · · · · · · · · · · · · · · · ·
3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1b 3.1c	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 4	EA EA	\$ 37,000 \$ 14,800	\$ - \$ 59,200	\$ 37,000 \$ 14,800	\$ - \$ 59,200	\$ 74,000 \$ 29,600	\$ - \$ 118,400
3.1b 3.1c 3.1d	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 4 0	EA EA EA	\$ 37,000	\$ -	\$ 37,000 \$ 14,800	\$ -	\$ 74,000 \$ 29,600 \$ 29,600	\$ - \$ 118,400 \$ -
3.1b 3.1c	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 4	EA EA	\$ 37,000 \$ 14,800 \$ 14,800	\$ - \$ 59,200 \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ -	\$ - \$ 59,200 \$ -	\$ 74,000 \$ 29,600 \$ 29,600	\$ - \$ 118,400 \$ - \$ -
3.1b 3.1c 3.1d 3.1e	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 4 0 0	EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ -	\$ - \$ 59,200 \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700	\$ - \$ 59,200 \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600 \$ -	\$ - \$ 118,400 \$ - \$ - \$ 111,000
3.1b 3.1c 3.1d 3.1e 3.1f	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 4 0 0	EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700	\$ - \$ 59,200 \$ - \$ - \$ 55,500	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ 59,200 \$ - \$ - \$ 55,500	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 4 0 0 15 12	EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 5 \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 14,800
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 4 0 0 15 12 3	EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ 59,200 \$ - \$ 5,500 \$ 22,200 \$ 5,550	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70'	0 4 0 0 15 122 3	EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ 59,200 \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 14,800
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70'	0 4 0 0 155 12 3 3 1	EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ 59,200 \$ - \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 37,000 \$ 14,800 \$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ 59,200 \$ - \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 74,000 \$ 29,600 \$ 29,600 \$	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 14,800 \$ 25,900
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' 230kV Substation A-Frame Structures - Stand alone	0 4 0 0 15 12 3 1 1 2	EA EA EA EA EA EA EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ 59,200 \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ 59,200 \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 14,800 \$ 25,900
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0 4 0 0 15 12 3 3 1 2	EA EA EA EA EA EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,555 \$ 7,400 \$ 12,950	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300	\$ - \$ 59,200 \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 14,800 \$ 25,900
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 4 0 0 15 12 3 1 2	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 14,800 \$ 25,900
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 4 0 0 15 12 3 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ - \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950 \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050	\$ - \$ 118,400 \$ - \$ - \$ \$ 111,000 \$ 44,400 \$ 11,100 \$ 14,800 \$ 25,900
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph	0 4 0 0 15 12 3 3 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 1,2025 \$ -	\$ - \$ 59,200 \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ - \$ 2,775	\$ - \$ 59,200 \$ - \$ 55,500 \$ 22,200 \$ 5,555 \$ 7,400 \$ 12,950 \$ - \$ - \$ - \$ - \$ 5,550 \$ 7,400 \$ 12,950	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ -	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 125,900 \$ - \$ 25,900
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2c 3.2d 3.2e	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph	0 4 0 0 15 12 3 3 1 1 2 2	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775	\$ - \$ 59,200 \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ - \$ 2,775	\$ - \$ 59,200 \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950 \$ - \$ - \$ - \$ - \$ 5,500 \$ 7,400 \$ 12,950	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ 5 -	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 25,900 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph	0 4 0 0 15 12 3 3 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ 2,775 \$ 1,295	\$ - \$ 59,200 \$ - \$ 5,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ -	\$ - \$ 59,200 \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950 \$ - \$ - \$ - \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ 5,550	\$ - \$ 118,400 \$ - \$ - \$ 111,000 \$ 44,400 \$ 11,100 \$ 14,800 \$ 25,900
3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2e 3.2f 3.2g	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 1 Ph Instrument Transformer Stand	0 4 0 0 15 12 3 1 1 2 2	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775 \$ 1,295	\$ - \$ 59,200 \$ - \$ - \$ 55,500 \$ 22,200 \$ 5,550 \$ 7,400 \$ 12,950	\$ 74,000 \$ 29,600 \$ 29,600 \$ 3,700 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950 \$ 66,600 \$ 24,050 \$ 24,050 \$ -55 \$ 5,550 \$ 2,590	\$ \$ 118,400 \$ \$ \$ 111,000 \$ 44,400 \$ 11,100 \$ 25,900 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ 11,000 \$ 14,800 \$ 25,900

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0		\$ 18,500		\$ 18,500		\$ 37,000	
3.3b	Substation A-Frame Structures - Shared Column	0		\$ 18,500		\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0		\$ 7,955		\$ 7,955		\$ 15,910	
3.3d	Fuse Stand	0		\$ 7,955		\$ 7,955		\$ 15,910	
3.3e	Bus Support 3ph	0		\$ 3,330		\$ 3,330		\$ 6,660	
3.3f	Bus Support 1 Ph	0		\$ 1,850 \$ 740		\$ 1,850 \$ 740	\$ - \$ -	\$ 3,700	\$ - \$ -
3.3g 3.3h	Instrument Transformer Stand Arrester Stand	0		\$ 740		\$ 740 \$ 740		\$ 1,480 \$ 1,480	
3.3j	Wave Trap Stand	0		\$ 3,700		\$ 3,700	\$ -	\$ 7,400	
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TATION STRUCTURES			7 7,112	\$ 199,800	, ,,,,,	\$ 199,800		\$ 399,600
4. MAJOR EQU					7 200,000		- 200,000		+
4.1	345kV								
4.1a	Circuit Breakers	3	EA	\$ 200,000	\$ 600,000	\$ 80,000	\$ 240,000	\$ 280,000	\$ 840,000
4.1b	Capacitor Banks	0		\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	
4.1c	345 kV - 230 kV Auto Transformer	0			\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV								
4.2a	Circuit Breakers	0		\$ 115,000		\$ 80,000	\$ -	\$ 195,000	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0		\$ -	\$ -	\$ 60,000		\$ 60,000	
	especies builts		271	, , , , , , , , , , , , , , , , , , ,	Ÿ	* 00,000	Ť	ψ σο,σσσ	*
TOTAL - MAJO	R EQUIPTMENT				\$ 600,000		\$ 240,000		\$ 840,000
5. SMALL EQU	IPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	1	EA	\$ 40,000		\$ 15,000		\$ 55,000	
5.1b	Disconnect Switches - 3ph w/ manual operator	3		\$ 35,000		\$ 17,500	\$ 52,500	\$ 52,500	\$ 157,500
5.1c	VT'S	3	EA	\$ 13,000				\$ 25,000	
5.1d 5.1e	CCT'S	3 6	EA EA	\$ 13,000 \$ 13,000	,	\$ 8,000 \$ 8,000	\$ 24,000 \$ 48,000	\$ 21,000 \$ 21,000	\$ 63,000 \$ 126,000
5.1f	Arresters	6	EA	\$ 6,500	\$ 39,000	\$ 1,500	\$ 9,000	\$ 8,000	\$ 48,000
5.1g	Wave Traps	1	EA	\$ 13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
5.1h	Station Service Transformers	0		\$ 200,000		\$ 50,000	\$ -	\$ 250,000	
5.1j					7	7 25,555		7 253,555	-
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0		\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0		\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0		\$ 10,000		\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0		\$ 5,000		\$ 6,000	\$ -	\$ 11,000	•
5.2g	Wave Traps	0		\$ 13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV			A	A	A	•	A	•
5.3a	Line Switches - 3ph w/ motor operator	0		\$ 33,000		\$ 15,000		\$ 48,000 \$ 45,500	
5.3b 5.3c	Disconnect Switches - 3ph w/ manual operator VT'S	0		\$ 28,000 \$ 13,000		\$ 17,500 \$ 8,000		\$ 45,500 \$ 21,000	
5.3c 5.3d	CT'S	0		\$ 13,000		\$ 8,000		\$ 21,000	
		0		\$ 8,000		\$ 8,000		\$ 16,000	
	ICCVI'S			1 7 5,000					
5.3e	CCVT'S Arresters	0	EA	\$ 3.420	\$ -	\$ 6.000	- \$	\$ 9.420	\$ -
	Arresters Wave Traps	0		\$ 3,420 \$ -		\$ 6,000 \$ -	\$ -	\$ 9,420 \$ -	\$ - \$ -
5.3e 5.3f	Arresters		EA	\$ -	\$ -	\$ -		\$ -	
5.3e 5.3f 5.3g	Arresters Wave Traps	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
	LEQUIPTMENT / MATERIALS					\$ 353,000		\$ 192,500		\$	545,500
	OUSE / PANELS / GENERATOR										
6.1	CONTROL HOUSE	1	EA	\$	243,750	\$ 243,750	\$ 42,500	\$ 42,500	\$ 286,250	\$	286,250
6.2	Protection and Telecom Equipment Panels	5	EA	\$	35,000	\$ 175,000	\$ 10,000	\$ 50,000	\$ 45,000		225,000
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4	Control Cables	1	LS	\$	207,900	\$ 207,900	\$ 207,900	\$ 207,900	\$ 415,800		415,800
6.5	SCADA and Communications	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	1	EA	\$	50,000				\$ 150,000		150,000
6.7	DC Distribution System	1	EA	\$	50,000		\$ 100,000	\$ 100,000	\$ 150,000		150,000
6.8	Security Fire Alarm	0	EA EA	\$	7,500		\$ 7,500 \$ 7,500	\$ - \$ -	\$ 15,000	-	-
6.10		0	EA	\$	7,500	\$ - \$ -	\$ 7,500 \$ 80,000	\$ - \$ -	\$ 15,000 \$ 180.000		
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	>	
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR					\$ 726,650		\$ 500,400		\$	1,227,050
7. MISC ITEMS											
7.1	Conduit & Cable Trench System	1	L.S.	\$	55,500.00	\$ 55,500	\$ 76,500.00	\$ 76,500	\$ 132,000	\$	132,000
7.2	Rigid Bus, Fittings & Insulators	1	L.S.	\$	62,535.00	\$ 62,535	\$ 118,550.00	\$ 118,550	\$ 181,085	\$	181,085
7.3	Strain Bus, Connectors & Insulators	1	L.S.	\$	92,250.00	\$ 92,250	\$ 114,135.00	\$ 114,135	\$ 206,385	\$	206,385
7.4	Grounding System	1	L.S.	\$	10,395.00	\$ 10,395	\$ 48,870.00	\$ 48,870	\$ 59,265	\$	59,265
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$	-
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$	-
7.7	Strain Bus Insulators - 115kV	0	EA	\$	1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$	-
7.8	Low Voltage AC Station Service	0	LS	\$	125,000		\$ 125,000	\$ -	\$ 250,000		-
7.9	SSVT Service	0	LS	\$	180,000		\$ 180,000		\$ 360,000	\$	-
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000		\$ 250,000	\$	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12	Install new communication tower foundation.	1	LS			\$ -	\$ 75,000	\$ 75,000	\$ 75,000		75,000
7.13 7.14	Relocate exiting communication tower.	1	LS			\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$	50,000
7.15											
7.16 7.17											
7.18											
7.19											
7.20											
7.21											
7.22											
7.23											
7.24											
7.25											
TOTAL - MISC	ITEMS					\$ 525,680		\$ 788,055		\$	1,313,735
	Scotland Substation - Install					\$ 2,815,548		\$ 2,367,205		\$	5,182,753
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
<u> </u>	Contractor Mobilization / Demobilization			1			A				
8.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 51,828	\$ 51,828	\$ 51,828	\$	51,828
<u> </u>	Project Management, Material Handling & Amenities			+							\longrightarrow
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 264,727	\$ 264,727	\$ 264,727	\$	264,727
0.3	Litility RM and Project Oversite	4	l c	+		\$ -	ć F1 020	ć F1 030	ć F1.000	ė	F1 030
8.3 8.4	Utility PM and Project Oversite Site Accommodation, Facilities, Storage	1		\$		\$ - \$ -	\$ 51,828 \$ 51,828				51,828 51,828
0.4	Engineering	1	L)	1	-	-	y 31,028	y 31,020	y 31,020	,	31,020
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 414,620	\$ 414,620	\$ 414,620	s	414,620
8.6	LiDAR	-	LS	\$		\$ -		\$ -	\$ -	\$	- 14,020
8.7	Geotech	4		\$			\$ 3,500				14,000
8.8	Surveying/Staking	1		\$		\$ -	\$ 36,279				36,279
	Testing & Commissioning			1				. 25,273		<u> </u>	
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 129,569	\$ 129,569	\$ 129,569	\$	129,569
	Permitting and Additional Costs		-	1			-,	-,	-,,,,,	Ė	-,
	•			-							

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ite	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -		-	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -		-	\$ 15,548	\$ 15,548	\$ 15,548	\$ 15,548
8.13	Real Estate Costs (New)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -		-	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	Ş	-	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -		-	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	Ş	-	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 225,2	44 \$	225,244	\$ -	\$ -	\$ 225,244	\$ 225,244
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		Ş	-	\$ 5,183	\$ 5,183	\$ 5,183	\$ 5,183
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				Ş	225,244		\$ 1,035,409		\$ 1,260,653

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H. SS New Scot.-Install

NAT & NYPA - T028 - (Segment A, Enhanced) I. New Scotland Substation - Removal Total: \$

94,640

NAT & NYPA - T028 - (Segr	NAT & NYPA - T028 - (Segment A, Enhanced)											
		Supply	Installa	tion		Total						
I. New Scotland Substation - Removal												
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-						
2. SUBSTATION FOUNDATIONS	\$	-	\$	28,800	\$	28,800						
3. SUBSTATION STRUCTURES	\$	-	\$	27,000	\$	27,000						
4. MAJOR EQUIPTMENT	\$	-	\$	-	\$	-						
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	4,500	\$	4,500						
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-						
7. MISC ITEMS	\$	-	\$	21,000	\$	21,000						
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$	13,340	\$	13,340						
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-						
SUBTOTAL:	\$	-	\$	94,640	\$	94,640						
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-						
TOTAL:	\$	-	\$	94,640	\$	94,640						

Descr	iptic	on of	Wo	rk:

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
I. New S	cotland Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000		\$ 203,000	
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75		\$ 75	
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	12	EA	\$ -	\$ -	\$ 2,400	\$ 28,800	\$ 2,400	\$ 28,800
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -		\$ -	\$ 11,000	\$ -
2.2e	Switch Stand Foundations	0		\$ -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j 2.2k	Instrument Transformer Stand Foundations	0	EA EA	\$ - \$ -	\$ - \$ -	\$ 2,400 \$ 2,400	\$ - \$ -	\$ 2,400 \$ 2,400	
2.2K 2.2m	Arrester Stand Foundations Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ - \$ -
2.2m	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p	INISC. Structure i ouridations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
			27,	·	<u> </u>	·	Ť	Ψ	*
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n 2.3p	Station Service Foundations	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.5p	Misc. Structure Foundations	U	EA	\$ -	\$ -	ş -	ş -	\$ -	-
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations				A	A	<u> </u>	4	•
2.6a 2.6b	70' Lightning Mast Foundation	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ - \$ -	\$ -	\$ - \$ -
2.00		U	EA	, -	· -	, -	· -	· -	-
TOTAL - SUBST	TATION FOUNDATIONS				\$ -		\$ 28,800		\$ 28,800
	N STRUCTURES				Ţ.		20,000		20,000
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	12	EA	\$ -	\$ -	\$ 2,250	\$ 27,000	\$ 2,250	\$ 27,000
3.1g	Instrument Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand Misc. Structures	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.1k	IVIISC. SCI UCCUTES	0	EA	· ·	\$ -	\$ -	· -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0		\$ -	\$ -			\$ 27,000	
3.2c	Switch Stands	0		\$ -		\$ 9,750		\$ 9,750	
3.2d	Station Service Transformer Stand	0		\$ -	\$ -		\$ -	\$ -	
3.2e	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
3.2f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	
3.2g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ 1,050	\$ -	\$ 1,050	\$ -
3.2g	mstrument transformer stand	0		\$ -	\$ -	\$ 1,050		\$ 1,050	

1.0 Anne Proposed	Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1 10 10 10 10 10 10 10	3.2j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ 4,500	\$ -	\$ 4,500	\$ -
2.33 Abdotted in Affront Structures - Stand Sore	3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.33 Abdotted in Affront Structures - Stand Sore										
3.00 Abbottom A Famore Continues - Channel 0 FA 5 5 5 5 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 640 5 5 5 6 640 5 5 5 6 640 5 5 5 5 5 6 640 5 5 5 5 5 5 5 5 5										
2 Sunta Stands D VA S S S S C C S C S S	3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.50 No. Stand		Substation A-Frame Structures - Shared Column				\$ -		'		\$ -
3.30 But Support 3 Ph						\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
331 Biol Support Print Transformer Stand 0 CA 5 5 5 5 5 5 5 5 5										
3 Instrument Transformer Stand		*** *				·				
2319 America Stand										•
3.3 Wine trap Stand D LA S S S S S S S S S						7				
33 MIC STACTURES										
TOTAL-SUBSTATION STRUCTURES S										
ALL SECTION ALL Creat Breakers	3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ALDIO COLUMBRAY Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation Continuation C										
## 4.19 Crack Breakers						\$ -		\$ 27,000		\$ 27,000
4.10 Carpott Breakers 0 EA S S S S S S S S S										
### 410							4			
A 12 200W										
4.20 2000V		Capacitor Banks				·				
4.2 398V			0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.2 Circuit Breakers 0 EA 5 \$ \$ 7,000 \$ \$ 7,000 \$ \$ \$ 7,000 \$ \$ \$ 7,000 \$ \$ \$ \$ \$ \$ \$ \$ \$										
4.3 158W										
4.3 Circuit Breakers					<u> </u>			'		
4.3	4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3										
43.b Capacitor Banks 0 EA 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5										
TOTAL-MANDR EQUIPMENT / MITERIALS S - S S S S S S S S										
S.SMALEQUIPMENT / MATERIALS S.1 S.5 S. S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5	4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
S.SMALEQUIPMENT / MATERIALS S.1 S.5 S. S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5 S.5										
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5.2j 115kV 5.3 Line Switches - 3ph w/ motor operator 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$								·		
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5.3c VT'S 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<										
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1 5 d 16 10 10 10 10 10 10 10 10 10 10 10 10 10										
	5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 4,500		\$ 4,500
	IOUSE / PANELS / GENERATOR						, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS				4	4	4	_		
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -		\$ -
7.2	Rigid Bus, Fittings & Insulators	1	LS	\$ -	\$ -	\$ 21,000.00	\$ 21,000		\$ 21,000
7.3 7.4	Strain Bus, Connectors & Insulators	0	LS EA	\$ -	Ÿ	\$ 21,000.00 \$ 42,000.00	\$ - \$ -	ÿ 21,000	\$ - \$ -
	Grounding System	U	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	> -
7.5 7.6									
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7.11									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 21,000		\$ 21,000
I Now S	cotland Substation - Removal				\$ -		\$ 81,300		\$ 81,300
					, ·		\$ 81,300		3 81,300
8. MOB/DEMO	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
<u> </u>	Contractor Mobilization / Demobilization					A 040	4 040	4 042	4 040
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 813	\$ 813	\$ 813	\$ 813
	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler		1.0		<u>,</u>	\$ 4.153	ć 4.453	ć 4.453	ć 4453
8.2	and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 4,153	\$ 4,153	\$ 4,153	\$ 4,153
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 813	\$ 813	\$ 813	\$ 813
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 813	\$ 813		\$ 813
3.4	Engineering	1		-	¥	7 313	÷ 613	y 013	, 013
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 6,504	\$ 6,504	\$ 6,504	\$ 6,504
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ 0,504	\$ -		\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -		\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 569	\$ -	т	\$ -
	Testing & Commissioning								•
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 2,033	\$ -	\$ 2,033	\$ -
	Permitting and Additional Costs					,			
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 244	\$ 244	\$ 244	\$ 244
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits /DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	-	LS		\$ -	\$ 81	\$ - \$ 13,340		\$ - \$ 13,340
					\$ -				

NAT & NYPA - T028 - (Segment A, Enhanced) Total: \$ 86,710

NAT & NYPA - T028 - (Segmen	NAT & NYPA - T028 - (Segment A, Enhanced)								
		Supply	Installation			Total			
J. Porter Substation - Install									
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-			
2. SUBSTATION FOUNDATIONS	\$	-	\$	-	\$	-			
3. SUBSTATION STRUCTURES	\$	-	\$	-	\$	-			
4. MAJOR EQUIPTMENT	\$	-	\$	-	\$	-			
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	-	\$	-			
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-			
7. MISC ITEMS	\$	15,008	\$	56,904	\$	71,912			
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,201	\$	13,597	\$	14,798			
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-			
SUBTOTAL:	\$	16,209	\$	70,501	\$	86,710			
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-			
TOTAL:	\$	16,209	\$	70,501	\$	86,710			

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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Porter	Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$ -
1.3	Substation Fence	0	LF	\$	100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4										
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ -		\$ -		\$ -
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	0	EA	\$	14,940		\$ 16,000		\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025		\$ 60,000		\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145		\$ 28,000		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000		\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	\$	1) 102	\$ -	\$ 4,800		\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$.,	\$ -	\$ 4,800		\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800		\$ 9,282	
2.1k	Arrester Stand Foundations	0	EA	\$	4,482		\$ 4,800		\$ 9,282	
2.1m	Wave Trap Stand Foundations	0	EA	\$	4,482		\$ 4,800	\$ -	\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
				\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952		\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820		\$ 48,000		\$ 92,820	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	·	\$ 24,000	· ·	\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410		\$ 24,000		\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$	3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -			\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -		\$ -	. ,	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	•			\$ 34,034	
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -			\$ 6,188	•
2.3g	Bus Support 3ph Foundations	0		\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0		\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0		\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION FOUNDATIONS								
3. SUBSTATIO	N STRUCTURES				\$ -		\$ -		\$ -
					\$ -		\$ -		\$ -
3.1	345kV				\$ -		\$ -		\$ -
3.1a	345kV Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	
		0 0		\$ 37,000 \$ 37,000			\$ -	\$ 74,000 \$ 74,000	\$ -
3.1a	Substation A-Frame Structures - Stand alone				\$ -		\$ - \$		\$ -
3.1a 3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ - \$	\$ 37,000 \$ 14,800	\$ - \$ - \$ -	\$ 74,000	\$ - \$ - \$ -
3.1a 3.1b 3.1c	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ 37,000 \$ 14,800	\$ - \$ - \$ -	\$ 37,000 \$ 14,800	\$ - \$ - \$ -	\$ 74,000 \$ 29,600	\$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 0 0	EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800	\$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ -	\$ - \$ - \$ - \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600	\$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 0 0	EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ -	\$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700	\$ - \$ - \$ - \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600 \$ -	\$ - \$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e 3.1f	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0 0	EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 0 0	EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0 0 0 0	EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	0 0 0 0 0 0 0	EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	0 0 0 0 0 0 0	EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 -	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1h 3.1j 3.1k	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures	0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ \$ 3,700 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 -	\$ 74,000 \$ 29,600 \$ 29,600 \$ - \$ 7,400 \$ 3,700 \$ 3,700 \$ 14,800 \$ 12,950	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1h 3.2	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3 ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone	0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ - \$ 3,700 \$ 1,850 \$ 1,850 \$ 7,400 \$ 6,475	\$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - 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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	
	Switch Stands	0	EA	\$ 7,955	\$ -	,	\$ -	\$ 15,910	
	Fuse Stand	0	EA	\$ 7,955	\$ -		\$ -	\$ 15,910	
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -		\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
	Arrester Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
TOTAL CLIDET	ATION STRUCTURES				\$ -		\$ -		ć
4. MAJOR EQU					\$ -		\$ -		\$ -
	345kV								
	Circuit Breakers	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
	Capacitor Banks	0	EA	\$ -	\$ -		\$ -	\$ 80,000	
	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	
	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	
	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
	115kV	2		A	<u> </u>	d 50,000	A	d 50,000	
	Circuit Breakers	0	EA EA	\$ - \$ -	\$ - \$ -	\$ 60,000 \$ 60,000	\$ - \$ -	\$ 60,000 \$ 60,000	\$ - \$ -
4.30	Capacitor Banks	U	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	, -
TOTAL - MAJO	L R EQUIPTMENT				\$ -		\$ -		\$ -
	PTMENT / MATERIALS				,		J		Ĵ
	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 40,000	\$ -	\$ 17,500	\$ -	\$ 57,500	\$ -
5.1c	VT'S	0	EA	\$ -	\$ -		\$ -	\$ 12,000	
	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
	CCVT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
	Arresters	0	EA	\$ 6,500	\$ -	\$ 1,500	\$ -	\$ 8,000 \$ 21.000	
5.1g 5.1h	Wave Traps	0	EA EA	\$ 13,000 \$ 200,000	\$ - \$ -	\$ 8,000 \$ 50,000	\$ - \$ -	\$ 21,000 \$ 250,000	
5.1ii	Station Service Transformers	U	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	, -
3.1)									
5.2	230kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ 30,000	\$ -	\$ 15,000	\$ -	\$ 45,000	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	\$ -
5.2c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -		\$ -	\$ 16,000	
	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	
	Wave Traps	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ 28,000	\$ -	\$ 15,000	\$ -	\$ 43,000	\$ -
	Disconnect Switches - 3ph w/ manual operator	0		\$ 33,000				\$ 50,500	
	VT'S	0	EA	\$ 13,000		\$ 8,000		\$ 21,000	
	CT'S	0	EA		\$ -	\$ 8,000	\$ -	\$ 21,000	
5.3e	CCVT'S	0	EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$ -
	Arresters	0				\$ 6,000		\$ 9,420	
	Wave Traps	0		\$ -			\$ -		\$ -
	Station Service Transformers	0	EA	\$ -	\$ -		\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CRASS	FOUNDTMENT / MATERIALS				¢		ć		ć
I O I AL - SIVIALI	. EQUIPTMENT / MATERIALS				\$ -		\$ -		\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6 CONTROL H	OUSE / PANELS / GENERATOR									
6.1	CONTROL HOUSE	0	EA	\$	551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$ -
6.2	Protection and Telecom Equipment Panels	0	EA	\$	35,000		\$ 10,000	\$ -	\$ 45,000	\$ -
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
6.4	Control Cables	0		\$	35,000		\$ 12,500		\$ 47,500	\$ -
6.5	SCADA and Communications	0		\$		\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0		\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.7	DC Distribution System	0		\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.8	Security	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
6.9	Fire Alarm	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR					\$ -		\$ -		\$ -
7. MISC ITEMS										
7.1	Conduit & Cable Trench System	0	LF	\$	185.00	\$ -	\$ 170.00	\$ -	\$ 355	\$ -
7.2	Rigid Bus, Fittings & Insulators	1	LS	\$	15,008.40	\$ 15,008	\$ 56,904.00	\$ 56,904	\$ 71,912	\$ 71,91
7.3	Strain Bus, Connectors & Insulators	0	LF	\$	13.38	\$ -	\$ 39.35	\$ -	\$ 53	\$ -
7.4	Grounding System	0	LF	\$	6.93	\$ -	\$ 32.58		\$ 40	
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050		\$ 3,050	\$ -
7.6	Strain Bus Insulators - 230kV	0		\$	1,400		\$ 750		\$ 2,150	
7.7	Strain Bus Insulators - 115kV	0		\$	1,000		\$ 550		\$ 1,550	
7.8	Low Voltage AC Station Service	0		\$	50,000		\$ 75,000		\$ 125,000	
7.9	SSVT Service	0		\$	45,000		\$ 45,000		\$ 90,000	
7.10	Control Conduits from Trench to Equipment	0		\$	125,000		\$ 125,000	\$ -	\$ 250,000	
7.11	Misc. Materials (Above and Below Ground)	0	LS	\$	180,000	\$ -	\$ 180,000	\$ -	\$ 360,000	\$ -
7.12										
7.13										
7.14				-						
7.15				-						
7.16 7.17										
7.17				-						
7.18				1						
7.19				1						
7.21										
7.22				1						
7.23										
7.24										
7.25										
TOTAL - MISC	ITEMS					\$ 15,008		\$ 56,904		\$ 71,91
I Dortor	Substation - Install					\$ 15,008		\$ 56,904		\$ 71,91
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					7 15,000		30,304		7 71,51
—	Contractor Mobilization / Demobilization			1		_				
8.1	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 719	\$ 719	\$ 719	\$ 71
	Project Management, Material Handling & Amenities			-						
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ -	\$ 3,673	\$ 3,673	\$ 3,673	\$ 3,67
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 719	\$ 719	\$ 719	\$ 71
8.4	Site Accommodation, Facilities, Storage	1		\$		\$ -	\$ 719			
	Engineering									
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 5,753	\$ 5,753	\$ 5,753	\$ 5,75
8.6	LiDAR	•	Mile	\$		\$ -	\$ -		\$ -	\$ -
8.7	Geotech	-	Site	\$	-	\$ -	\$ -		\$ -	
8.8	Surveying/Staking		Site	\$	-	\$ -	\$ 503	\$ -	\$ 503	\$ -
	Testing & Commissioning									
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 1,798	\$ 1,798	\$ 1,798	\$ 1,79
	Permitting and Additional Costs									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cos	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 216	\$ 216	\$ 216	\$ 216
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 1,201	\$ 1,20	L \$ -	\$ -	\$ 1,201	\$ 1,201
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 72	\$ -	\$ 72	\$ -
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,20		\$ 13,597		\$ 14,798

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J. SS Porter-Install

NAT & NYPA - T028 - (Segment A, Enhanced) K. Porter Substation - Removal

552,137

Total: \$

NAT & NYPA - T028 -	(Segment A, Enhance	d)				
	Su	pply	1	Installation		Total
K. Porter Substation - Removal						
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$	-	\$	-
2. SUBSTATION FOUNDATIONS	\$	-	\$	126,600	\$	126,600
3. SUBSTATION STRUCTURES	\$	-	\$	206,100	\$	206,100
4. MAJOR EQUIPTMENT	\$	-	\$	43,500	\$	43,500
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$	59,500	\$	59,500
6. CONTROL HOUSE / PANELS	\$	-	\$	-	\$	-
7. MISC ITEMS	\$	-	\$	38,613	\$	38,613
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$	77,824	\$	77,824
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	-	\$	552,137	\$	552,137
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL	ć		ć	552 127	ć	552 127

escrip	tion of	Work:	

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
K. Porte	r Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATIC	ON FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	3	EA	\$ -	\$ -	\$ 7,200	\$ 21,600	\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	5	EA	\$ -	\$ -	\$ 11,000	\$ 55,000	\$ 11,000	\$ 55,000
									Page 47 of 65

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2e	Switch Stand Foundations	5	EA	\$ -	\$ -	\$ 5,200	\$ 26,000	\$ 5,200	\$ 26,000
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
2.2j	Instrument Transformer Stand Foundations	4	EA	\$ -	\$ -	\$ 2,400	\$ 9,600	\$ 2,400	
2.2k 2.2m	Arrester Stand Foundations Wave Trap Stand Foundations	6	EA EA	\$ -	\$ - \$ -	\$ 2,400	\$ 14,400 \$ -	\$ 2,400 \$ -	\$ 14,400 \$ -
2.2m	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p	Wisc. Structure Foundations	0	LA		-		-	,	-
2.3	115kV								
2.3a	Circuit Breaker Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.3f	Fuse Stand Foundations	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.3g 2.3h	Bus Support 3ph Foundations Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b 2.4c	345-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ 42.000	\$ - \$ -	\$ - \$ 42,000	\$ -
2.4c 2.4d	230kV-115kV Transformer Foundation w/ Oil Containment 115kV-69kV Transformer Foundation w/ Oil Containment	0		\$ -	\$ -	\$ 42,000 \$ -	\$ - \$ -	\$ 42,000 \$ -	\$ - \$ -
2.40	113KV-03KV Hansiothier Foundation wy Oil Containment		LA.	,	,	,	,	,	,
2.5	Control House Foundations / Pad		F.A.	Ć.	\$ -	<u></u>	<u></u>	^	\$ -
2.5a 2.5b	Control House / Pad Generator Foundation	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.30	Generator roundation	0	LA	,	,	,	,	,	,
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ -		\$ 126,600		\$ 126,600
	N STRUCTURES 345kV								
3.1 3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1a 3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g									\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
3.1h 3.1j	Arrester Stand Wave Trap Stand	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA		7	-			
3.1h 3.1j 3.1k	Arrester Stand Wave Trap Stand Misc. Structures 230kV	0 0	EA EA EA	\$ -	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ -
3.1h 3.1j 3.1k 3.2 3.2a	Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone	0 0 0	EA EA EA	\$ - \$ -	\$ -	\$ -	\$ -	\$ - \$ - \$ \$	\$ - \$ -
3.1h 3.1j 3.1k 3.2 3.2a 3.2b	Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ - \$ - \$ 27,000 \$ 27,000	\$ - \$ - \$ \$ \$	\$ - \$ - \$ 27,000 \$ 27,000	\$ - \$ - \$ \$ - \$ 135,000
3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c	Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 0 0 0 5 5	EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750	\$ - \$ - \$ - \$ 135,000 \$ 58,500	\$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750	\$ - \$ - \$ \$ - \$ 135,000 \$ 58,500
3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d	Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 0 0 0 5 6 6	EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ -	\$ - \$ - \$ - \$ 135,000 \$ 58,500 \$ -	\$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ -	\$ - \$ - \$ - \$ 135,000 \$ 58,500 \$ -
3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2c	Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 0 0 0 5 6 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ -	\$ - \$ - \$ - \$ 135,000 \$ 58,500 \$ - \$ -	\$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ -	\$ - \$ - \$ 135,000 \$ 58,500 \$ - \$ -
3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2c 3.2d	Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0 0 0 5 5 6 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ 2,250	\$ - \$ - \$ 135,000 \$ 58,500 \$ - \$ - \$ -	\$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ 2,250	\$ - \$ - \$ 135,000 \$ 58,500 \$ - \$ - \$ -
3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2c	Arrester Stand Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 0 0 0 5 6 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ 2,250	\$ - \$ - \$ 135,000 \$ 58,500 \$ - \$ - \$ - \$ 6,300	\$ - \$ - \$ 27,000 \$ 27,000 \$ 9,750 \$ - \$ - \$ 5 - \$ 2,250 \$ 1,050	\$ - \$ - \$ 135,000 \$ 58,500 \$ - \$ - \$ - \$ 5,500

						Labor & Equipment	Labor & Equipment		
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate	TOTAL
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -		\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0		\$ -	\$ -			\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -			\$ -	\$ -
3.3j	Wave Trap Stand	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.3k	Misc. Structures	U	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION STRUCTURES				\$ -		\$ 206,100		\$ 206,100
4. MAJOR EQU	JIPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -			•	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -			\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV Circuit Breakers	2	F.A.	ć	ć	ć 44.500	\$ 43,500	\$ 14.500	ć 42.500
4.2a 4.2b	Capacitor Banks	3	EA EA	\$ -	\$ -	\$ 14,500 \$ 42,000	-,	\$ 14,500 \$ 42,000	\$ 43,500 \$ -
4.20	Сарасцог ванкѕ	U	EA	ş -	ş -	\$ 42,000	ş -	\$ 42,000	, -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	R EQUIPTMENT				\$ -		\$ 43,500		\$ 43,500
	IPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.1b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -			\$ 5,500	
5.1c 5.1d	VT'S CT'S	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
5.1u	CCVT'S	0	EA	\$ -	\$ -			\$ 2,500	•
5.1f	Arresters	0		\$ -	\$ -			\$ 1,500	
5.1g	Wave Traps	0	EA	\$ -	\$ -		\$ -	\$ 2,500	
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	2		\$ -	\$ -			\$ 5,500	
5.2b	Disconnect Switches - 3ph w/ manual operator	3		\$ -	\$ -			\$ 5,500	
5.2c	VT'S	2	EA	\$ -	\$ -	\$ 1,500 \$ -		\$ 1,500	
5.2d 5.2e	CCT'S	0	EA EA	\$ -	\$ - \$ -	т	7	\$ - \$ 1,500	\$ - \$ 9,000
5.2f	Arresters	6	EA	\$ -	\$ -	\$ 2,500	\$ 15,000	\$ 2,500	\$ 15,000
5.2g	Wave Traps	2	EA	\$ -	\$ -	\$ 2,500	\$ 5,000	\$ 2,500	\$ 5,000
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j							•	•	•
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -			\$ -	
5.3b	Disconnect Switches - 3ph w/ manual operator	0		\$ -		\$ 5,500		\$ 5,500	
5.3c	VT'S	0		\$ -	\$ -			\$ -	
5.3d	CT'S	0		\$ -	\$ -				\$ -
5.3e	CCVT'S	0		\$ -	\$ -			\$ -	
5.3f	Arresters Wave Traps	0		\$ -	\$ -			\$ 1,500 \$ -	
5.3g 5.3h	Station Service Transformers	0		\$ -	\$ -			\$ -	
5.3j	Fuses	0		\$ -	\$ -				\$ -
5.0,					· .			•	•
	I .	I .	ı	1	1				

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 59,500		\$ 59,500
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.2	Protection and Telecom Equipment Panels	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0		\$ -	\$ -	\$ -	\$ -		\$ -
6.4	Control Cable	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0		\$ -	\$ -	\$ -	\$ -		\$ -
6.7	DC Distribution System	0		\$ -	\$ -	7	\$ -		\$ -
6.8	Security Fire Alarm	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -		\$ - \$ -
6.10	Generator	0		\$ -	\$ -	\$ -	\$ -		\$ - \$ -
0.10	Generator	0	LA LA	-	, -	· -	· -	· -	-
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS					,		Ţ		Ť
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	1	L.S.	\$ -	\$ -	\$ 18,937.50	\$ 18,938	\$ 18,938	\$ 18,938
7.3	Strain Bus, Connectors & Insulators	1	L.S.	\$ -	\$ -	\$ 19,675.00	\$ 19,675	\$ 19,675	\$ 19,675
7.4	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 38,613		\$ 38,613
K. Porte	Substation - Removal				\$ -		\$ 474,313		\$ 474,313
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 24,227	\$ 24,227	\$ 24,227	\$ 24,227
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 37,945	\$ 37,945	\$ 37,945	\$ 37,945
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -		\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 3,320	\$ -	\$ 3,320	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 11,858	\$ -	\$ 11,858	\$ -
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 1,423	\$ 1,423		\$ 1,423
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	•	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ - \$ -		\$ -
8.17	Color Tay on Materials	-	LS LS	\$ - \$ -	Ÿ	Ÿ	\$ - \$ -	\$ - \$ -	\$ - \$ -
8.18 8.19	Sales Tax on Materials	1	LS	2 -	\$ - \$ -	\$ - \$ 474	\$ -	•	
	Fees for permits, including roadway, railroad, building or other local permits DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	-	LS		\$ -	ş 474	\$ 77,824		\$ - \$ 77,824
-OTAL-IVIOD/	DEMOD, ENGINEERING, PERIVITING, TOC, PIVI & INDIRECTS.						7 //,024		7 11,024

L. Interconnection Edic Station

Estimate Revision: 5 Total: \$ 2,127,440

NAT & NYPA - T028 - (Segment A, Enhanced)											
	Supply			Installation		Total					
L. Interconnection Edic Station											
1. CLEARING & ACCESS	\$	-	\$	367,850	\$	367,850					
2. FOUNDATIONS	\$	168,366	\$	170,169	\$	338,536					
3. STRUCTURES	\$	501,469	\$	321,821	\$	823,289					
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-					
5. INSULATORS, FITTINGS, HARDWARE	\$	160,000	\$	94,400	\$	254,400					
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	66,387	\$	276,979	\$	343,365					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-					
SUBTOTAL:	\$	896,222	\$	1,231,219	\$	2,127,440					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	\$	896,222	\$	1,231,219	\$	2,127,440					

	Wor	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply I	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
L. Interc	onnection Edic Station										
1. CLEARING 8	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000			10,000
1.3	Access Road	-	LF			\$ -	\$ 45		\$ 45		-
1.4	Silt Fence	3,500.0	LF	7		\$ -	\$ 4	\$ 14,000			14,000
1.5	Matting - Access and ROW	3,500.0	LF			\$ -	\$ 70				245,000
1.6	Matting - To Work Area	300.0	LF			\$ -	\$ 70				21,000
1.7	Snow Removal	-	LS			\$ -	\$ 516,800		\$ 516,800		-
1.8	ROW Restoration	0.5	Mile			\$ -	,				5,000
1.9	Work Pads	20,000.0	SF	7		\$ -		\$ 70,400			70,400
1.10	Restoration for Work Pad areas	4,000.0	SF			\$ -	\$ 0.2				600
1.11	Temporary Access Bridge	-	EA			\$ -	\$ 20,035		\$ 20,035		-
1.12	Air Bridge	-	EA			\$ -	\$ 14,445		\$ 14,445		-
1.13	Stabilized Construction Entrance	-	EA			\$ -	\$ 4,580		\$ 4,580		-
1.14 1.15	Maintenance and Protection of Traffic on Public Roads	-	EA		,000	\$ -	\$ 4,130 \$ 2,500		\$ 4,130 \$ 4,500		-
	Gates	-	EA		750		\$ 2,500 \$ 1,250				-
1.16 1.17	Culverts / Misc. Access	-	EA EA						\$ 2,000 \$ 1,850		1,850
1.17	Concrete Washout Station	1	EA	\$		\$ - \$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$	- 1,850
1.19						\$ -		\$ - \$ -		Ś	
1.19	Crushed Rock	0	CY	\$	27		\$ 75		\$ 102	T	
	RING & ACCESS	0	CI	7		\$ -	<i>J</i> 75	\$ 367,850	ÿ 102	Ś	367,850
						÷ -		\$ 307,830		٦	307,830
2. FOUNDATIO											
2.1	Foundation – Drilled Pier – 8'X 27'	3	EA		,332		\$ 41,774	\$ 125,322			249,317
2.2	Foundation – Drilled Pier – 8'X 29'	1	EA	\$ 44	,372	\$ 44,372	\$ 44,847	\$ 44,847	\$ 89,219	\$	89,219
2.3	Rock Excavation Adder	-	CY	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$	-
2.4											
2.5										<u> </u>	
2.6										↓	
2.7										—	
2.8										↓	
2.9 2.10										—	
2.10										⊢—	
2.11					-					├─	
2.12					-					\vdash	
2.13					-					\vdash	
	1			l						——	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.15									
TOTAL - FOUN	DATIONS				\$ 168,366		\$ 170,169		\$ 338,536
3. STRUCTURE									
	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) – 105′	3	Structure	\$ 98,883		\$ 59,330	\$ 177,989	\$ 158,212	\$ 474,636
3.2	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$ 202,797					\$ 324,475
3.3	Install Grounding and Grounding Accessories	4	Pole	\$ 506	\$ 2,024	\$ 5,539	\$ 22,154	\$ 6,045	\$ 24,178
3.4					\$ -		\$ -		\$ -
3.5									_
3.6					\$ -		\$ -		\$ -
3.7					\$ -		\$ -		\$ -
3.8					\$ -		\$ -		\$ -
3.9					\$ -		\$ -		\$ -
3.10					\$ -		\$ -		\$ -
3.11					\$ -		\$ -		\$ - \$ -
3.12					7		Ÿ		
3.13				-	\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
TOTAL - STRUC	I CTURES				\$ 501,469		\$ 321,821		\$ 823,289
	R, SHIELDWIRE, OPGW				501,403		J J21,021		Ç 023,263
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	Š -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35		\$ 5.00		\$ 6.35	\$ -
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ 0.47		\$ 5.00	\$ -	\$ 5.47	
4.5	Remove Existing Cable From Existing Structures	-	Mile	\$ -		\$ 30,000	\$ -	\$ 30,000.00	\$ -
4.6	Remove Existing OPGW Cable	-	Mile		\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$ -
4.7	Remove Existing EH7	-	Mile	\$ -	-	\$ 12,000	\$ -	\$ 12,000.00	\$ -
4.8						, , , , , , , , , , , , , , , , , , , ,		,	
4.9		-							
4.10	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$ 1,750	\$ -	\$ 3,500	\$ -	\$ 5,250.00	\$ -
TOTAL: CONDI	JCTOR, SHIELDWIRE, OPGW:				\$ -		\$ -		\$ -
5. INSULATOR	FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)								
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)								
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$ 1,800	\$ 108,000	\$ 720	\$ 43,200	\$ 2,520	\$ 151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)								
5.5	OPGW Assembly - Tangent	-	Assembly		\$ -	\$ 150	\$ -	\$ 350	
5.6	OPGW Assembly - Angle / DE	4	Assembly		\$ 1,000	\$ 150	\$ 600		\$ 1,600
5.7	OHSW Assembly - Angle / DE	4	Assembly		\$ 1,000	\$ 150	\$ 600		\$ 1,600
5.8	OPGW Splice Boxes	-	Set	\$ 1,750		\$ 1,746	\$ -	\$ 3,496	\$ -
5.9	OPGW Splice & Test	-	EA	\$ 1,400		\$ 2,520	\$ -	\$ 3,920	
5.10	Spacer - Conductor	-	EA		\$ -	\$ 35		\$ 85	
5.11	Vibration Dampers - Conductor	-	EA		\$ -	\$ 35		\$ 70	
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$ 27	\$ -	\$ 35	\$ -	\$ 62	\$ -
5.13	Guys, Anchors, and Accessories	_	EA	\$ 720	\$ -	\$ 885	\$ -	\$ 1,605	\$ -
						*			-
5.14 5.15	Misc. materials (Signs and Markers)	-	Mile	7/0	\$ -	\$ 1,006	\$ -	\$ 1,776	\$ -
5.15									
5.17									
5.18									
5.19	Interconnection Arrangements	1	EA	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 100,000
5.20				1 22,000			. 22,300		
	ATOR, FITTINGS, HARDWARE				\$ 160,000		\$ 94,400		\$ 254,400
	onnection Edic Station				\$ 829,835		\$ 954,240		\$ 1,784,075
					9 023,033		9 334,240		7 1,704,073
6. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
- 6.1	Contractor Mobilization / Demobilization		1.5	-	ļ .	6 47011	ć 47.044	ć 47.044	ć 47.04
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
—	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 91,128	\$ 91,128	\$ 91,128	\$ 91,128

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rad	te	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 89,204	\$ 89,204	\$ 89,204	\$ 89,204
6.6	LiDAR	-	LS	\$ -	\$	-	\$ 5,352	\$ -	\$ 5,352	\$ -
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 12,489	\$ 12,489	\$ 12,489	\$ 12,489
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 5,352	\$ 5,352	\$ 5,352	\$ 5,352
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 66,38	87 \$	66,387	\$ -	\$ -	\$ 66,387	\$ 66,387
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 1,784	\$ 1,784	\$ 1,784	\$ 1,784
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	66,387		\$ 276,979		\$ 343,365

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NAT & NYPA - T028 - (Segment A, Enhanced) M. Interconnection New Scotland Station

Estimate	E		Total:	ċ	3,109,008	
Revision:	J		i Otal.	Ą	3,103,000	
	NAT & NYPA - T028 - (Segr	nent A, Enh	anced)			
			Supply		Installation	Total
	M. Interconnection New Scotland Station					
	1. CLEARING & ACCESS	\$	-	\$	367,850	\$ 367,850
	2. FOUNDATIONS	\$	365,657	\$	473,093	\$ 838,749
	3. STRUCTURES	\$	655,465	\$	445,628	\$ 1,101,092
	4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,555	\$	26,100	\$ 29,655
	5. INSULATORS, FITTINGS, HARDWARE	\$	161,130	\$	95,795	\$ 256,925
	6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	94,864	\$	419,873	\$ 514,737
	CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$ -
	SUBTOTAL:	\$	1,280,670	\$	1,828,338	\$ 3,109,008
	CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$ -
	TOTAL:	\$	1,280,670	\$	1,828,338	\$ 3,109,008
Description	of Work:					

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	connection New Scotland Station								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$ -	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	300.0	LF	\$ -	\$ -	\$ 70	\$ 21,000	\$ 70	\$ 21,000
1.7	Snow Removal		LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	20,000.0	SF	\$ -	\$ -	\$ 4	\$ 70,400	\$ 4	\$ 70,400
1.10	Restoration for Work Pad areas	4,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 600	\$ 0	\$ 600
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance		EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750) \$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 2	7 \$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEAR	ING & ACCESS				\$ -		\$ 367,850		\$ 367,850
2. FOUNDATIO	ONS								
2.1	Foundation – Drilled Pier – 8'X 50'	3	EA	\$ 76,500	\$ 229,500	\$ 77,320	\$ 231,959	\$ 153,820	\$ 461,459
2.2	Foundation – Drilled Pier – 8'X 89'	1	EA	\$ 136,150	\$ 136,156	\$ 137,614	\$ 137,614	\$ 273,770	\$ 273,770
2.3	Rock Excavation Adder	51.8	CY	\$ -	\$ -	\$ 2,000	\$ 103,520	\$ 2,000	\$ 103,520
2.4									
2.5									
2.6						1			
2.7									
2.8									<u> </u>
2.9									i
2.11						1			i
2.12									

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Estimate

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate		Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	
2.13											
2.14											
2.15								4		_	
TOTAL - FOUN						\$ 365,657		\$ 473,093		\$	838,749
3. STRUCTURES	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	3	Structure	\$	178,026	\$ 534,077	\$ 106,815	\$ 320,446	\$ 284,841	4	854,522
3.2	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1	Structure	\$	116,328	\$ 116,328	\$ 69,797		\$ 186,125		186,125
3.3	Install Grounding and Grounding Accessories	10	Structure	\$	506	\$ 5,060	\$ 5,539	\$ 55,385	\$ 6,045	\$	60,445
3.4						\$ -		\$ -			
3.5						ć		\$ -			
3.6				+		\$ - \$ -		\$ - \$ -			
3.8						\$ -		\$ -			
3.9						\$ -		\$ -			
3.10						\$ -		\$ -			
3.11				1		\$ -		\$ -			
3.12				+		\$ -		\$ -			
3.13				+		\$ -		\$ -		-	
3.14						\$ -		\$ -			
3.15						\$ -		\$ -			
TOTAL - STRUC	TURES					\$ 655,465		\$ 445,628		\$	1,101,092
	R, SHIELDWIRE, OPGW										
	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	1,500	LF	\$	1.90						10,350
4.2	(1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel	1,500	LF LF	\$	1.35 0.47		\$ 5.00 \$ 5.00		\$ 6.35 \$ 5.47		8,205
4.5	Remove Existing 345kV Cable From Existing Structures	0.3	Mile	\$	- 0.47	\$ -	\$ 30,000	\$ 7,500			7,500
4.6	Remove Existing OPGW Cable	-	Mile	\$	-	\$ -	\$ 12,000	, , , , , , , , , , , , , , , , , , , ,	\$ 12,000.00		-
4.7	Remove Existing EH7	0.3	Mile	\$	-	\$ -	\$ 12,000	\$ 3,600			3,600
4.8											
4.9						•					
4.10 4.11	Rider Poles - Relocated Rider Poles	-	Set EA	\$	1,750	\$ - \$ -	\$ 3,500 \$ 3,500	· .	\$ 3,500.00 \$ 5,250.00		-
	JCTOR, SHIELDWIRE, OPGW:	•	LA	3	1,/50	\$ 3,555	\$ 3,500	\$ 26,100	\$ 3,230.00	\$	29,655
	FITTINGS, HARDWARE					9,555		20,100		Ť	25,055
	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$	1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$	-
	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900	\$ -	\$ 560		\$ 1,460		-
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$	1,800	\$ 108,000			\$ 2,520		151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) OPGW Assembly - Tangent	-	Assembly	\$	900	\$ -	\$ 560 \$ 150	·	\$ 1,460 \$ 350		-
	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	-	Assembly Assembly	\$	250		\$ 150		\$ 400		-
	OHSW Assembly - Angle / DE	4	Assembly	\$	250	\$ 1,000			\$ 400		1,600
	OPGW Splice Boxes	-	Set	\$	1,750		\$ 1,746		\$ 3,496		·-
	OPGW Splice & Test	-	EA	\$	1,400		\$ 2,520		\$ 3,920		-
	Spacer - Conductor	9	EA	\$	50					\$	765
5.11	Vibration Dampers - Conductor	48	EA	\$		\$ 1,680			\$ 70		3,360
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$	-
5.13	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.14	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$	-
5.15				1.		\$ -		\$ -		\$	-
5.16	Interconnection Arrangements	1	EA	\$	50,000		\$ 50,000		\$ 100,000		100,000
5.17 5.18				+		\$ - \$ -		\$ - \$ -		\$	-
5.19				+		\$ -		\$ -		\$	-
5.20						\$ -		\$ -		\$	-
	ATOR, FITTINGS, HARDWARE					\$ 161,130		\$ 95,795		\$	256,925
M. Interd	connection New Scotland Station					\$ 1,185,806		\$ 1,408,465		\$	2,594,271
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$	25,943
	Project Management, Material Handling & Amenities	1		1			1				

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 132,511	\$ 132,511	\$ 132,511	\$ 132,511
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 25,943	\$ 25,943	\$ 25,943	\$ 25,943
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 129,714	\$ 129,714	\$ 129,714	\$ 129,714
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 18,160	\$ 18,160	\$ 18,160	\$ 18,160
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 7,783	\$ 7,783	\$ 7,783	\$ 7,783
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 94,864	\$ 94,864	\$ -	\$ -	\$ 94,864	. ,
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 2,594	\$ 2,594	\$ 2,594	
TOTAL - MOB/	TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 94,864		\$ 419,873		\$ 514,737

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NAT & NYPA - T028 - (Segment A, Enhanced)

System Upgrade Facilities (Various Stations for Edic/Marcy to New Scotland)

Estimate Revision: 5 Total: \$ 6,899,000

SYSTEM UPGI	RADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Rate	te N	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
SUF SS1	Marcy 345kV Bay 3300 - Reconductor Strain Bus UNS-18 Marcy-New Scotland Line	1	LS	\$ -	\$	-	\$ -	\$ -	\$ 664,560	\$	665,00
SUF SS1	Removals	1	LS	\$ -	\$	-	\$ -	\$ -	\$ 30,000	\$	30,00
SUF SS1	Engineering, T&C, PM, Indirects (25%)		LS %							\$	174,00
SUF SS1	SUF SS1 - TOTAL:				\$	-		\$ -		\$	869,00
SUF SS2	Marcy 345kV Bay 3100 - Reconductor Strain Bus, Replace (3) breakers and wave trap UE1-7- Marcy-Edic Line	1	LS	\$ -	\$	-	\$ -	\$ -	\$ 2,946,086	\$	2,947,00
SUF SS2	Removals	1	LS	\$ -	\$	-	\$ -	\$ -	\$ 120,720	\$	121,00
SUF SS2	Engineering, T&C, PM, Indirects (25%)		LS %							\$	767,00
SUF SS2	SUFSS 2 - TOTAL:				\$	-		\$ -		\$	3,835,00
SUF SS3	Edic 345kV Bay - UE1-7- Marcy-Edic Line Replace (2) breakers and wave trap	1	LS						\$ 1,661,294	\$	1,662,00
SUF SS3	Removals	1	LS	\$ -	\$	-	\$ -	\$ -	\$ 93,120	\$	94,00
SUF SS3	Engineering, T&C, PM, Indirects (25%)		LS %							\$	439,00
SUF SS3	SUF SS3 - TOTAL:				\$	-		\$ -		\$	2,195,00
SUF SS4		•	LS	\$ -	\$	-	\$ -	\$ -		\$	-
SUF SS4	Removals		LS %						\$ -	\$	-
SUF SS4	Engineering, T&C, PM, Indirects (25%)		LS %							\$	-
SUF SS4	SUF SS4 - TOTAL:				\$	-		\$ -		\$	-
SUF SS5		-	LS	\$ -	\$	-	\$ -	\$ -		\$	-
SUF SS5	Removals		LS %						\$ -	\$	-
SUF SS5	Engineering, T&C, PM, Indirects (25%)		LS %							\$	-
SUF SS5	SUF SS4 - TOTAL:				\$	-		\$ -		\$	-
	STATIONS SUF DIRECT TOTAL:									\$	5,519,000
	STATIONS SUF INDIRECT TOTAL:									\$	1,380,000
	STATIONS SUF TOTAL									Ś	6,899,000

NAT & NYPA - T028 - (Segment A, Enhanced) N. Interconnection Rotterdam Station

te n:	5		Total:	\$ 4,612,611	
	NAT & NYPA -	T028 - (Segment A, Enhan	ced)		
			Supply	Installation	Total
	N. Interconnection Rotterdam Station				
	1. CLEARING & ACCESS	\$	-	\$ 1,233,050	\$ 1,2
	2. FOUNDATIONS	\$	192,145	\$ 325,963	\$ 5
	3. STRUCTURES	\$	546,722	\$ 837,150	\$ 1,3
	4. CONDUCTOR, SHIELDWIRE, OPGW	\$	65,923	\$ 437,250	\$ 5
	5. INSULATORS, FITTINGS, HARDWARE	\$	165,730	\$ 118,480	\$ 2
	6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	77,642	\$ 612,557	\$ 69
	CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$
	SUBTOTAL:	\$	1,048,161	\$ 3,564,450	\$ 4,6
	CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$
	TOTAL:	\$	1,048,161	\$ 3,564,450	\$ 4,6

Description of	of work:				<u> </u>	<u> </u>		<u> </u>	1
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Interc	onnection Rotterdam Station								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	7.0	Acre	\$ -	\$ -	\$ 15,000	\$ 105,000	\$ 15,000	\$ 105,000
	Clearing the ROW - Light (mowing)	5.0	Acre	\$ -	\$ -	\$ 5,000		,	
	Access Road	-	LF	\$ -	\$ -	\$ 45		\$ 45	
	Silt Fence	4,800.0	LF	\$ -	\$ -	\$ 4			\$ 19,200
	Matting - Access and ROW	4,800.0	LF	\$ -	\$ -	\$ 70			
	Matting - To Work Area	2,400.0	LF	\$ -	\$ -	\$ 70			
	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800		\$ 516,800	
	ROW Restoration	1.0	Mile	\$ -	\$ -	\$ 10,000			
	Work Pads	160,000.0	SF	\$ -	\$ -	\$ 4	1,		\$ 563,200
	Restoration for Work Pad areas	32,000.0	SF	\$ -	\$ -	\$ 0.2			\$ 4,800
	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580		\$ 4,580	
	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130		\$ 4,130	
	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	
	Culverts / Misc. Access	-	EA	\$ 750		\$ 1,250		\$ 2,000	
	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	·	\$ 1,850	
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
	Crushed Rock	0	CY	\$ 27	\$ -	\$ 75		\$ 102	
TOTAL - CLEAR					\$ -		\$ 1,233,050		\$ 1,233,050
2. FOUNDATIO									
	10' ED Rock BF	6	EA	\$ 358					
	15' ED Rock BF	18	EA	\$ 536					
	20' ED Rock BF	4	EA	\$ 715		\$ 7,150			
2.4	Foundation – Drilled Pier – 8'X 29'	4	EA	\$ 44,372	\$ 177,487	\$ 44,847	\$ 179,388	\$ 89,219	\$ 356,875
2.5	Rock Excavation Adder	-	CY	\$ -	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ -		\$ -
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		\$ -

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	e Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.14					\$ -		\$ -		\$ -
2.15					\$ -		\$ -		\$ -
TOTAL - FOUN					\$ 192,145		\$ 325,963		\$ 518,108
3. STRUCTURE									
3.1	15kV 3-CKT TANGENT DIST WOOD POLE	3	Pole	\$ 3,50				\$ 7,100	\$ 21,300
3.2	15Kv 3-CKT MA DIST WOOD POLE	1	Pole	\$ 3,50				\$ 7,100	\$ 7,100
3.3	15kV 3-CKT DE - WOOD POLE	2	Pole	\$ 3,50				\$ 7,100	\$ 14,200
3.4	115kV 1-CKT TANGENT - WOOD POLE	5	Pole	\$ 4,50				\$ 8,900	\$ 44,500
3.5	115kV 1-CKT MA - WOOD POLE	2	Pole	\$ 4,50				\$ 8,900	\$ 17,800
3.6	115kV 1-CKT DE - WOOD POLE	11	Pole	\$ 5,50					\$ 115,500
3.7	115kV 2-CKT TANGENT - WOOD POLE	4	Pole		0 \$ 22,000			,	\$ 42,000 \$ 632,848
3.8	115kV 2-CKT DE - STEEL POLE		Pole	\$ 98,88			<u> </u>		
3.9	Remove Existing Structure and Accessories	24	EA		\$ - \$ -	\$ 12,300	\$ 295,200 \$ -	\$ 12,300	\$ 295,200
3.10					\$ - \$ -		\$ -		\$ - \$ -
3.11	Install Crounding and Crounding Assessaries	32	Christian	\$ 50		\$ 5,539	7	\$ 6.045	<u> </u>
3.12	Install Grounding and Grounding Accessories	32	Structure	\$ 50	\$ 16,192	\$ 5,539	l .	\$ 6,045	\$ 193,424
3.14					\$ -		\$ - \$ -		\$ - \$ -
3.14					\$ -		\$ -		\$ -
TOTAL - STRUC	TTIPES				\$ 546,722		\$ 837,150		\$ 1,383,872
	R, SHIELDWIRE, OPGW				\$ 340,722		\$ 657,130		3 1,363,672
4. CONDUCTO 4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	23,400	LF	\$ 1.9	0 \$ 44,460	\$ 5.00	\$ 117,000	\$ 6.90	\$ 161,460
4.1	(1) OPGW 36 Fiber AC-33/38/571	23,400	LF		5 \$ -	\$ 5.00		\$ 6.35	
4.3	(1) 3/8" EHS7 Steel	7,800	LF		7 \$ 3,666		•	\$ 5.47	
4.5	Remove Existing Cable	6.6	Mile	\$		\$ 30,000		\$ 30,000.00	\$ 197,700
4.6	Remove Existing EH7	2.2	Mile	\$ -		\$ 12,000		\$ 12,000.00	\$ 26,400
4.7	15kV - (1) 477kcmil 26/7 ACSR "Hawk"	9,630	LF	\$ 1.6		\$ 5.00		\$ 6.62	\$ 63,751
4.8	15kV - (1) 336kcmil 26/7 ACSK "Hawk"	1,800	LF		2 \$ 2,196			\$ 6.22	
4.9	13KV - (1) 330KCHIII 20/7 ACSIX EHIHEE	-	Li	7 1.2	2,150	3.00	3,000	ÿ 0.22	7 11,150
4.10	Rider Poles - Relocated	-	Set	Ś -	\$ -	\$ 3,500	Ś -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA		0 \$ -	\$ 3,500		\$ 5,250.00	\$ -
	JCTOR, SHIELDWIRE, OPGW:			-/	\$ 65,923	7 3,330	\$ 437,250	, , , , , , , , , , , , , , , , , , , ,	\$ 503,173
5. INSULATOR	FITTINGS, HARDWARE								
5.1	115kV Tangent (1-Group of 9-Bells Each Assembly)	33	Assembly	\$ 1,00	0 \$ 33,000	\$ 560	\$ 18,480	\$ 1,560	\$ 51,480
5.2	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	66	Assembly	\$ 1,00	0 \$ 66,000	\$ 560	\$ 36,960	\$ 1,560	\$ 102,960
5.3	15kV Tangent	12	Assembly	\$ 10	0 \$ 1,200	\$ 75	\$ 900	\$ 175	\$ 2,100
5.4	15kV Dead-end & Angle Insulators	18	Assembly	\$ 10	0 \$ 1,800	\$ 75	\$ 1,350	\$ 175	\$ 3,150
5.5	Neutral, Distribution, Tangent	4	Assembly	\$ 10	0 \$ 400	\$ 75	\$ 300	\$ 175	\$ 700
5.6	Neutral, Distribution, DE/Side	2	Assembly	\$ 10	0 \$ 200	\$ 75	\$ 150	\$ 175	\$ 350
5.7	Jumper, DE/Angle, 3PH	4	Assembly		0 \$ 400			\$ 175	\$ 700
5.8	OPGW Assembly - Tangent	2	Assembly	\$ 20	0 \$ 400	\$ 150	\$ 300	\$ 350	\$ 700
5.9	OSHW Assembly - Tangent	11	Assembly		0 \$ 2,750				\$ 4,400
5.10	OHSW Assembly - Angle / DE	38	Assembly	\$ 25				\$ 400	\$ 15,200
5.11	OPGW Splice Boxes	-	Set	\$ 1,75		\$ 1,746		\$ 3,496	\$ -
5.12	OPGW Splice & Test	-	EA	\$ 1,40		\$ 2,520		\$ 3,920	\$ -
5.13	Spacer - Conductor	-	EA		0 \$ -	\$ 35		\$ 85	\$ -
5.14	Vibration Dampers - Conductor	-	EA		5 \$ -	\$ 35		\$ 70	\$ -
5.15	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA		7 \$ -	\$ 35		\$ 62	
5.16	Guys, Anchors, and Accessories	14.0	EA		0 \$ 10,080			\$ 1,605	
5.17	Misc. materials (Signs and Markers)	-	Mile	\$ 77	0 \$ -	\$ 1,006		\$ 1,776	\$ -
5.18					\$ -		\$ -		\$ -
5.19	Interconnection Arrangements	8	EA	\$ 5,00		\$ 5,000		\$ 10,000	\$ 80,000
5.20					\$ -	-	\$ -		\$ -
5.21					\$ -		\$ -		\$ -
5.22					\$ -	-	\$ -		\$ -
5.23	ATOR, FITTINGS, HARDWARE				\$ -		Υ		\$ - \$ 284.210
					\$ 165,730				, , , , ,
N. Interd	connection Rotterdam Station				\$ 970,519		\$ 2,951,893		\$ 3,922,412
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
	Project Management, Material Handling & Amenities								
	·			•		*			

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Suppl	y Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 200,351	\$ 200,351	\$ 200,351	\$ 200,351
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 196,121	\$ 196,121	\$ 196,121	\$ 196,121
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 11,767	\$ 11,767		11,767
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 27,457	\$ 27,457	\$ 27,457	\$ 27,457
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 11,767	\$ 11,767	\$ 11,767	\$ 11,767
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 77,642	\$ 7	77,642	\$ -	\$ -	\$ 77,642	\$ 77,642
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 3,922	\$ 3,922	\$ 3,922	\$ 3,922
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 7	77,642		\$ 612,557		\$ 690,199

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NAT & NYPA - T028 - (Segment A, Enhanced)

Q. Princetown Switchyard - Install

Estimate Revision: 5 Total: \$ 15,967,903

NAT & NYPA - T028 - (Segmen	NAT & NYPA - T028 - (Segment A, Enhanced)										
	Supply			Installation		Total					
Q. Princetown Switchyard - Install											
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	163,560	\$	909,775	\$	1,073,335					
2. SUBSTATION FOUNDATIONS	\$	1,193,706	\$	1,213,490	\$	2,407,196					
3. SUBSTATION STRUCTURES	\$	582,750	\$	582,750	\$	1,165,500					
4. MAJOR EQUIPTMENT	\$	800,000	\$	320,000	\$	1,120,000					
5. SMALL EQUIPTMENT / MATERIALS	\$	1,382,000	\$	636,000	\$	2,018,000					
6. CONTROL HOUSE / PANELS	\$	1,621,800	\$	1,043,550	\$	2,665,350					
7. MISC ITEMS	\$	895,854	\$	1,373,004	\$	2,268,858					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	531,174	\$	2,718,490	\$	3,249,664					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-					
SUBTOTAL:	\$	7,170,844	\$	8,797,059	\$	15,967,903					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	\$	7,170,844	\$	8,797,059	\$	15,967,903					

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
Q. Princ	etown Switchyard - Install										
	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	3.1	ACRES	\$	-	\$ -	\$ 203,000	\$ 634,375	\$ 203,000	\$	634,375
1.2	Station stone within substation fence.	1,080	CY	\$	27	\$ 29,160	\$ 75	\$ 81,000	\$ 102	\$	110,160
1.3	Substation Fence	1,260	LF	\$	100	\$ 126,000	\$ 100	\$ 126,000	\$ 200	\$	252,000
1.4	Permanent Access Road - 20'-Wide (Extend Existing)	240	LF	\$	35	\$ 8,400	\$ 285	\$ 68,400	\$ 320	\$	76,800
1.5											
1.6										L	
1.7										Ь—	
1.8 1.9										├	
1.10										 	
1.11										\vdash	
1.12											
1.13											
1.14											
1.15											
	PREP/ GRADING/ FENCING / CIVIL					\$ 163,560		\$ 909,775		\$	1,073,335
2. SUBSTATIO 2.1	N FOUNDATIONS 765kV										
2.1a	Circuit Breaker Foundations		EA.	\$ 22	2,410	\$ -	\$ 24,000	\$ -	\$ 46,410	ć	_
2.1b	Capacitor Bank Foundations Capacitor Bank Foundations		EA.	\$ 22	-,410	\$ -	\$ 24,000	\$ -	\$ 40,410	5	-
2.1c	Caisson DE Foundations (for DE A frame str stand alone)		EA.	\$ 52	2,290	\$ -	\$ 56,000	\$ -	\$ 108,290	\$	-
2.1d	Caisson DE Foundations (for DE A frame str shared column)		EA.	\$ 52	2,290	\$ -	\$ 56,000	\$ -	\$ 108,290	\$	-
2.1e	Switch Stand Foundations		EA.	\$ 8	3,964	\$ -	\$ 8,964		\$ 17,928		-
2.1f	Fuse Stand Foundations		EA.		3,964	\$ -	\$ 8,964		\$ 17,928		-
2.1g	Bus Support 1ph Foundations (High Bus)		EA.	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1h	Bus Support 1 Ph Foundations (Low Bus)		EA.		3,964	\$ -	\$ 8,964		\$ 17,928		-
2.1j	Instrument Transformer Stand Foundations		EA.	-	3,964	\$ -	\$ 8,964 \$ 8,964	<u> </u>	\$ 17,928 \$ 17.928		-
2.1k 2.1m	Arrester Stand Foundations Wave Trap Stand Foundations		EA. EA.		3,964 3,964	\$ - \$ -	\$ 8,964 \$ 8,964		\$ 17,928 \$ 17,928		-
2.1m	Misc. Structure Foundations		EA.	Ś	-	\$ -	\$ 6,504	\$ -	\$ 17,528	5	-
2.1p	Misc. Structure i odnations		En.	7		Ÿ	Ÿ	Ÿ	, , , , , , , , , , , , , , , , , , ,		
2.2	345kV										
2.2a	Circuit Breaker Foundations	4	EA.	\$ 14	1,940	\$ 59,760	\$ 14,940	\$ 59,760	\$ 29,880	\$	119,520
2.2b	Capacitor Bank Foundations	0	EA		,025	\$ -	\$ 60,000		\$ 116,025		-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	16	EA.		,145	\$ 418,320				-	836,640
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA.		,145	\$ -	\$ 26,145		\$ 52,290		-
2.2e	Switch Stand Foundations	48	EA.		1,482 1,482	\$ 215,136 \$ 26,892					430,272 53,784
2.2f	Fuse Stand Foundations	6	EA.] \$ 4	1,482	\$ 26,892	\$ 4,482	\$ 26,892	\$ 8,964		.ge 61 of 65

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2g	Bus Support 1ph Foundations (High Bus)	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations (Low Bus)	39	EA.	\$ 4,482	\$ 174,798	\$ 4,482	\$ 174,798	\$ 8,964	\$ 349,596
2.2j	Instrument Transformer Stand Foundations	36	EA.	\$ 4,482	\$ 161,352		\$ 161,352		\$ 322,704
2.2k	Arrester Stand Foundations	12	EA.	\$ 4,482	\$ 53,784		\$ 53,784	\$ 8,964	
2.2m	Wave Trap Stand Foundations	4	EA.	\$ 4,482	\$ 17,928	\$ 4,482	\$ 17,928	\$ 8,964	\$ 35,856
2.2n	Misc. Structure Foundations		EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600		\$ 34,034	
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -		\$ -		\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -		\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	,	\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -		\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations 765-345kV Transformer Foundation w/ Oil Containment		EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4a	765-345KV Transformer Foundation W/ Oil Containment		EA.	<u> </u>	\$ -		\$ -		, -
2.4b	765-345kV Transformer Fire Wall		EA.	\$ 106,074	\$ -	\$ 113,600	\$ -	\$ 219,674	\$ -
2.4c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad / Generator / Station Service Distribution Line								
2.5a	Control House / Pad - 25' x 50'	1		\$ 17,928	·			\$ 37,128	
2.5b	Generator Foundation	1	EA	\$ 16,434	\$ 16,434			\$ 34,034	
2.5c	Station Service Distribution Line - 3ph.	1	LS	\$ -	\$ -	\$ 15,120	\$ 15,120	\$ 15,120	\$ 15,120
2.6	Lightning Mast Foundations		EA.	\$ 5,229	ć 24.274	ć F.600	ć 22.500	\$ 10.829	ć C4.074
2.6a 2.6b	70' Lightning Mast Foundation	6	EA	\$ 5,229 \$ -	\$ 31,374 \$ -	\$ 5,600 \$ -	\$ 33,600 \$ -	,	\$ 64,974 \$ -
2.6c				\$ -	\$ -	\$ -	\$ -		\$ -
2.00				-	-	-	, -	, -	-
TOTAL - SUBS	ITATION FOUNDATIONS				\$ 1,193,706		\$ 1,213,490		\$ 2,407,196
	ON STRUCTURES				Ţ 1,133,700		Ţ,E10) 150		2,107,130
3.1	765kV								
3.1a	Substation A-Frame Structures - Stand alone		EA.	\$ 111,000	\$ -	\$ 111,000	\$ -	\$ 222,000	\$ -
3.1b	Substation A-Frame Structures - Shared Column		EA.	\$ 111,000	\$ -		\$ -	\$ 222,000	
3.1c	Switch Stands		EA.	\$ 22,200	\$ -		\$ -	\$ 44,400	
3.1d	Station Service Transformer Stand		EA.	\$ -	\$ -	\$ -	\$ -		\$ -
3.1e	Bus Support 1ph (High Bus)		EA.	\$ 7,400	\$ -		\$ -	\$ 14,800	
3.1f	Bus Support 1 Ph (low Bus)		EA.	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
3.1g	Instrument Transformer Stand		EA.	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.1h	Arrester Stand		EA.	\$ 3,700	\$ -	\$ 3,700	\$ -		\$ -
3.1j	Wave Trap Stand		EA.	\$ 9,250	\$ -	\$ 9,250	\$ -		\$ -
3.1k	Lightning Mast		EA.	\$ 9,250	\$ -	\$ 9,250	\$ -	\$ 18,500	\$ -
	345kV								
3.2				¢ 27,000	\$ 148,000	\$ 37,000	\$ 148,000	\$ 74,000	\$ 296,000
3.2 3.2a		А	FΔ				1 - 1-0,000	- ,5000	
3.2a	Substation A-Frame Structures - Stand alone	4		\$ 37,000 \$ 37,000			Ś -	\$ 74,000	Ś -
3.2a 3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000		\$ 74,000 \$ 29,600	
3.2a 3.2b 3.2c	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 8	EA EA	\$ 37,000 \$ 14,800	\$ - \$ 118,400	\$ 37,000 \$ 14,800	\$ 118,400	\$ 29,600	\$ 236,800
3.2a 3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA EA EA	\$ 37,000	\$ - \$ 118,400 \$ 14,800	\$ 37,000 \$ 14,800 \$ 14,800	\$ 118,400 \$ 14,800	\$ 29,600	\$ 236,800 \$ 29,600
3.2a 3.2b 3.2c 3.2d	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 8 1	EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800	\$ - \$ 118,400 \$ 14,800 \$ -	\$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550	\$ 118,400 \$ 14,800 \$ -	\$ 29,600 \$ 29,600 \$ 11,100	\$ 236,800 \$ 29,600 \$ -
3.2a 3.2b 3.2c 3.2d 3.2e	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 8 1 0	EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550	\$ - \$ 118,400 \$ 14,800 \$ - \$ 144,300	\$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550 \$ 3,700	\$ 118,400 \$ 14,800 \$ - \$ 144,300	\$ 29,600 \$ 29,600 \$ 11,100 \$ 7,400	\$ 236,800 \$ 29,600 \$ - \$ 288,600
3.2a 3.2b 3.2c 3.2d 3.2e 3.2f	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 8 1 0 39	EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550 \$ 3,700	\$ - \$ 118,400 \$ 14,800 \$ - \$ 144,300 \$ 66,600	\$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550 \$ 3,700 \$ 1,850	\$ 118,400 \$ 14,800 \$ - \$ 144,300 \$ 66,600	\$ 29,600 \$ 29,600 \$ 11,100 \$ 7,400 \$ 3,700	\$ 236,800 \$ 29,600 \$ - \$ 288,600 \$ 133,200
3.2a 3.2b 3.2c 3.2d 3.2e 3.2f 3.2g	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 8 1 0 39 36	EA EA EA EA EA EA EA EA	\$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550 \$ 3,700 \$ 1,850	\$ - \$ 118,400 \$ 14,800 \$ - \$ 144,300 \$ 66,600 \$ 22,200	\$ 37,000 \$ 14,800 \$ 14,800 \$ 5,550 \$ 3,700 \$ 1,850 \$ 1,850	\$ 118,400 \$ 14,800 \$ - \$ 144,300 \$ 66,600 \$ 22,200	\$ 29,600 \$ 29,600 \$ 11,100 \$ 7,400 \$ 3,700 \$ 3,700	\$ 236,800 \$ 29,600 \$ - \$ 288,600 \$ 133,200 \$ 44,400

3.3a S 3.3b S 3.3c S 3.3d F 3.3e E 3.3f E 3.3g I 3.3h A 3.3j V	115kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand	0							
3.3a S 3.3b S 3.3c S 3.3d F 3.3e E 3.3f E 3.3g I 3.3h A 3.3j V	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands								
3.3b S 3.3c S 3.3d F 3.3e E 3.3f E 3.3g II 3.3h A 3.3j V	Substation A-Frame Structures - Shared Column Switch Stands		EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c S 3.3d F 3.3e E 3.3f E 3.3g II 3.3h A 3.3j V	Switch Stands	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3d F 3.3e E 3.3f E 3.3g I 3.3h A 3.3j V		0	EA	\$ 7,955	\$ -		\$ -	\$ 15,910	•
3.3e E 3.3f E 3.3g I 3.3h / 3.3j \		0	EA	\$ 7,955	\$ -		\$ -	\$ 15,910	
3.3f E 3.3g I 3.3h A 3.3j \	Bus Support 3ph	0	EA	\$ 3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3g I 3.3h / 3.3j \	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	•
3.3h /	Instrument Transformer Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3j \	Arrester Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	
	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	'	\$ 12,950	
	ivisc. Structures		EA.	0,475	7	9 0,475	7	7 12,550	7
OTAL - SUBST/	ATION STRUCTURES				\$ 582,750		\$ 582,750		\$ 1,165,500
MAJOR EQUIP					302,730		302,730		7 1,103,300
	345kV								
	Circuit Breakers	4	EA	\$ 200,000	\$ 800,000	\$ 80,000	\$ 320,000	\$ 280,000	\$ 1,120,000
	Capacitor Banks		EA	\$ -	\$ -	\$ 80,000	\$ 320,000	\$ 80,000	\$ 1,120,000
7.20	capacitor paring		LA.	1	· ·	y 30,000		2 30,000	-
4.3 1	115kV								
	Circuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	Ś -
	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
		"	- LA	-	· ·	- 55,500	-	5 55,500	*
OTAL - MAJOR	REQUIPTMENT				\$ 800,000		\$ 320,000		\$ 1,120,000
	PTMENT / MATERIALS				ψ σσο,σσσ		\$ 520,000		Ţ 1,120,000
	345kV								
	Line Switches - 3ph w/ motor operator	4	EA	\$ 40,000	\$ 160,000	\$ 15,000	\$ 60,000	\$ 55,000	\$ 220,000
	Disconnect Switches - 3ph w/ manual operator	8	EA	\$ 35,000	\$ 280,000		\$ 140,000	\$ 52,500	
	VT'S	12	EA	\$ 25,000	\$ 300,000		\$ 144,000		\$ 444,000
	CT'S	12	EA	\$ 13,000	\$ 156,000		\$ 96,000	\$ 21,000	
	CCVT'S	12	EA	\$ 13,000	\$ 156,000		\$ 96,000	\$ 21,000	
	Arresters	12	EA	\$ 6,500	\$ 78,000	\$ 1,500	\$ 18,000	\$ 8,000	\$ 96,000
	Wave Traps	4	EA	\$ 13,000	\$ 52,000	\$ 8,000	\$ 32,000	\$ 21,000	\$ 84,000
	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000		\$ 50,000	\$ 250,000	
5.2j	Station Service mansionners	1	LA	200,000	200,000	30,000	30,000	250,000	3 230,000
3.2									
.3 1	115kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -		\$ -	\$ 45,500	
	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	•
	CCVT'S	0	EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$ -
	Arresters	0	EA	\$ 3,420	\$ -		\$ -	\$ 9,420	•
	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Station Service Transformers	0	EA	\$ -	\$ -	·	\$ -	\$ -	\$ -
	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
OTAL - SMALL	EQUIPTMENT / MATERIALS				\$ 1,382,000		\$ 636,000		\$ 2,018,000
CONTROL HO	OUSE / PANELS / GENERATOR								
	CONTROL HOUSE	1	EA	\$ 245,750	\$ 245,750	\$ 37,500	\$ 37,500	\$ 283,250	\$ 283,250
	Protection and Telecom Equipment Panels	18	EA	\$ 35,000	\$ 630,000		\$ 180,000	\$ 45,000	
						·	,	,	
	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	
	Control Cables	1	LS	\$ 281,050					
	SCADA and Communications	0	EA	\$ 35,000				\$ 47,500	
	Low Voltage AC Distribution	2					, ,		
	DC Distribution System	2		\$ 50,000	\$ 100,000				
	Security	1		\$ 7,500					
	Fire Alarm	1		\$ 7,500	\$ 7,500				
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
OTAL CONTE	ON HOUSE / DANIELS / CENTERATOR				4 (2)		4 4045		A 2.00F
MISC ITEMS 3	OL HOUSE / PANELS / GENERATOR				\$ 1,621,800		\$ 1,043,550		\$ 2,665,350

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
7.15	Conduit & Cable Trench System	1,200	LF	\$ 12	5.07	\$ 150,084	\$ 170.00	\$ 204,000	\$ 295	\$	354,084
7.16	Rigid Bus, Fittings & Insulators	1,000	LF	\$ 12	5.07	\$ 125,070	\$ 237.10	\$ 237,100	\$ 362	\$	362,170
7.17	Strain Bus, Connectors & Insulators	1,600	LF	\$ 6	1.50	\$ 98,400	\$ 78.69	\$ 125,904	\$ 140	\$	224,304
7.18	Grounding System	10,000	LF	\$	6.93	\$ 69,300	\$ 32.58	\$ 325,800	\$ 40	\$	395,100
7.19	Strain Bus Insulators - 345kV	24	EA	\$ 2	,000	\$ 48,000	\$ 1,050	\$ 25,200	\$ 3,050	\$	73,200
7.20	Low Voltage AC Station Service	1	LS	\$ 50	,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.21	SSVT Service	1	LS	\$ 50	,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.22	Control Conduits from Trench to Equipment	1	LS	\$ 125	,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.23	Misc. Materials (Above and Below Ground)	1	LS	\$ 180	,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.24	·									1	
7.25											
7.26										1	
7.27										1	
7.28										1	
7.29											
TOTAL - MISC	TITEMS					\$ 895,854		\$ 1,373,004		\$	2,268,858
	etown Switchyard - Install					\$ 6,639,670		\$ 6,078,569		\$	12,718,239
8. MOB/DEMO	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization									<u> </u>	
8.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 127,182	\$ 127,182	\$ 127,182	\$	127,182
	Project Management, Material Handling & Amenities									<u> </u>	
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 649,627	\$ 649,627	\$ 649,627	\$	649,627
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 127,182	\$ 127,182	\$ 127,182	\$	127,182
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 127,182		\$ 127,182		127,182
	Engineering									1	
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 1,017,459	\$ 1,017,459	\$ 1,017,459	\$	1,017,459
8.6	LiDAR		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	
8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 89,028	\$ 89,028	\$ 89,028	\$	89,028
	Testing & Commissioning										
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 317,956	\$ 317,956	\$ 317,956	\$	317,956
	Permitting and Additional Costs										
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 38,155	\$ 38,155	\$ 38,155	\$	38,155
8.13	Real Estate Costs (New)		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ 198,000	\$ 198,000	\$ 198,000	\$	198,000
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 531	,174	\$ 531,174	\$ -	\$ -	\$ 531,174	\$	531,174
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 12,718	\$ 12,718	\$ 12,718		12,718
TOTAL - MORA	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 531,174		\$ 2,718,490		\$	3,249,664

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R. SY Princetown - Install

	NAT & NYPA - T028 - (Segment A, Enhanced)
	ESTIMATE ASSUMPTIONS & CLARIFICATIONS
1	Cost Estimate is based on 2017 rates.
2	Construction schedule is in accordance with proposed schedule - we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction
_	schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
	We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
	All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
5	We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type.
6	Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
7	Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
8	Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
9	A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
10	We have assumed that all project details provided are accurate unless noted otherwise.
11	Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
12	A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
13	A contractor allowance of 4.44% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
14	An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
15	A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
16	An allowance of 5% for transmission design and engineering has been included in the total section.
17	An allowance of 8% for substation design and engineering has been included in the total section.
18	An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
19	An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
20	An allowance of 3.75% for substation testing and commissioning has been included in the total section.
21	An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
	New York state sales tax of 8% is included in all material pricing.
23	An allowance of 1.5% for insurance is included in the DPS sheet.
24	The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.

Assumptions & Clarifications
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		ITC (T031)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$53,084
	1.2	Foundations	\$43,503
	1.3	Structures	\$80,620
	1.4	Conductor, Shiedwire and OPGW	\$41,525
	1.5	Insulators, Fitting and Hardwares	\$18,615
		Subtotal (1)	\$237,347
	2	Substations	
st	2.1	Rotterdam Substation	\$19,805
C	2.2	Edic Substation	\$2,185
Direct Cost	2.3	Princetown Substation	\$27,974
	2.4	New Scotland Substation	\$3,615
	2.5	Porter Substation	\$546
	2.6	Knickerbocker Substation	\$0
	2.7	Marcy Substation	\$0
	2.8	Substation Interconnections	\$8,383
		Subtotal (2)	\$62,507
		Total (1+2)	\$299,855
		Contractors Mark-up (15% of Total 1+2)	\$44,978
		Total Direct Cost (A)	\$344,833
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,999
ا با	3.2	Project Management, Material Handling & Amenities	\$18,925
So	3.3	Engineering	\$19,832
Indirect Cost	3.4	Testing & Commissioning	\$1,560
Indi	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$20,688
	3.6	Compensation for use of NYPA Structures (1 Ckt.)	\$8,919
	3.7	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,941
		Total Indirect Cost (3)	\$80,864
		Subtotal Project Cost (B=A+3) 2017 \$	\$425,697
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project	\$0
	4.2	NUF identified during Evaluation	\$0
		Subtotal NUF Cost (C)	\$0
		Total Project Cost (B+C) 2017 \$	\$425,697
		Total Project Cost 2018 \$	\$438,468

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ITC - T031 - (Segment A)

Estimate Revision: 5

	ITC - T031 - (Segment A) - Direct Costs	Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Edic to Princetown	\$ 147,955,377
Direct Labor, Material & Equipment Costs	B. Transmission Line Princetown to Rotterdam	\$ 26,168,326
Direct Labor, Material & Equipment Costs	C. Transmission Line Princetown to New Scotland	\$ 63,223,686
Direct Labor, Material & Equipment Costs	D. Rotterdam Substation - Install	\$ 19,804,932
Direct Labor, Material & Equipment Costs	E. Rotterdam Substation - Removal	\$ -
Direct Labor, Material & Equipment Costs	F. Edic Substation - Install	\$ 2,148,785
Direct Labor, Material & Equipment Costs	G. Edic Substation - Removal	\$ 35,950
Direct Labor, Material & Equipment Costs	H. New Scotland Substation - Install	\$ 3,614,529
Direct Labor, Material & Equipment Costs	I. New Scotland Substation - Removal	\$ -
Direct Labor, Material & Equipment Costs	J. Porter Substation - Install	\$ 71,912
Direct Labor, Material & Equipment Costs	K. Porter Substation - Removal	\$ 474,313
Direct Labor, Material & Equipment Costs	L. Interconnection Edic Station	\$ 1,784,075
Direct Labor, Material & Equipment Costs	M. Interconnection New Scotland Station	\$ 2,676,471
Direct Labor, Material & Equipment Costs	N. Interconnection Rotterdam Station	\$ 3,922,412
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$ -
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$ -
Direct Labor, Material & Equipment Costs	Q. Princetown Switchyard - Install	\$ 27,974,019
	SUBTOTAL:	\$ 299,854,787
	CONTRACTOR MARK-UP (OH&P)	\$ 44,978,218
	CONTINGENCY ON ENTIRE PROJECT	\$ -
	TOTAL DIRECT:	\$ 344,833,005

	ITC - T031 - (Segment A) - Indirect Costs	1	Total Each Segment
Indirect Costs	A. Transmission Line Edic to Princetown	\$	39,405,617
Indirect Costs	B. Transmission Line Princetown to Rotterdam	\$	5,266,851
Indirect Costs	C. Transmission Line Princetown to New Scotland	\$	13,535,116
Indirect Costs	D. Rotterdam Substation - Install	\$	4,760,643
Indirect Costs	E. Rotterdam Substation - Removal	\$	-
Indirect Costs	F. Edic Substation - Install	\$	511,515
Indirect Costs	G. Edic Substation - Removal	\$	5,612
Indirect Costs	H. New Scotland Substation - Install	\$	852,011
Indirect Costs	I. New Scotland Substation - Removal	\$	-
Indirect Costs	J. Porter Substation - Install	\$	14,225
Indirect Costs	K. Porter Substation - Removal	\$	74,047
Indirect Costs	L. Interconnection Edic Station	\$	329,155
Indirect Costs	M. Interconnection New Scotland Station	\$	508,897
Indirect Costs	N. Interconnection Rotterdam Station	\$	658,957
Indirect Costs	O. System Upgrade Facilities (Various Lines for Edic to New Scotland)	\$	-
Indirect Costs	P. System Upgrade Facilities (Various Stations for Edic to New Scotland)	\$	-
Indirect Costs	Q. Princetown Switchyard - Install	\$	7,000,251
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitagation)	\$	7,940,904
	TOTAL INDIREC	T: \$	80,863,802
	TOTAL ESTIMATED CO	ST \$	425,696,808

A. Transmission Line Edic to Princetown

Total: \$ 187,360,994

ITC - T031 - (Segment A)

ITC - T031	- (Segment A)					
		Supply		Installation		Total
A. Transmission Line Edic to Princetown						
1. CLEARING & ACCESS	\$	75,250	\$	37,260,504	\$	37,335,754
2. FOUNDATIONS	\$	6,908,556	\$	17,295,145	\$	24,203,701
3. STRUCTURES	\$	19,810,382	\$	29,562,906	\$	49,373,288
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	4,975,475	\$	21,134,180	\$	26,109,655
5. INSULATORS, FITTINGS, HARDWARE	\$	7,521,769	\$	3,411,210	\$	10,932,979
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	3,143,315	\$	36,262,303	\$	39,405,617
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	42,434,746	\$	144,926,248	\$	187,360,994
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL	¢	42 434 746	¢	144 926 248	Ġ	187 360 994

Description of Work:

Estimate

Revision:

5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Trans	smission Line Edic to Princetown								
1. CLEARING	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	154.0	Acre		\$ -	\$ 5,000	,	\$ 5,000	\$ 770,000
1.3	Access Road	70,963.2	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	354,816.0	LF	\$ -	\$ -		\$ 1,419,264		\$ 1,419,264
1.5	Matting - Access and ROW	283,852.8	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	25,200.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	67.2	Mile	\$ - \$ -	\$ -	\$ 16,000 \$ 10,000	\$ 1,075,200 \$ 672,000	\$ 16,000 \$ 10,000	
1.8	ROW Restoration Work Pads	67.2 2,225,000.0	Mile SF	\$ - \$ -	\$ - \$ -		\$ 672,000		\$ 672,000
1.10	Restoration for Work Pad areas	445,000.0	SF SF	\$ -	\$ -	\$ 0.15			\$ 7,832,000
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	<u> </u>
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	т	\$ 14,445	<u> </u>
1.13	Stabilized Construction Entrance	_	EA	š -	\$ -	\$ 4,580		\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	100	EA	\$ -	\$ -	\$ 4,130		\$ 4,130	
1.15	Culverts / Misc. Access	55	EA	\$ 750	\$ 41,250	\$ 1,250			
1.16	Gates	17	EA	\$ 2,000	\$ 34,000	\$ 2,500	\$ 42,500	\$ 4,500	\$ 76,500
1.17	Concrete Washout Station	40	EA	\$ -	\$ -	\$ 1,850	\$ 74,000	\$ 1,850	\$ 74,000
TOTAL - CLEA	RING & ACCESS:				\$ 75,250		\$ 37,260,504		\$ 37,335,754
2. FOUNDATI	ONS								
2.1	Direct Embed - 345kV SC 2-Pole Steel H-Frame - V-String - Tangent	806	EA	\$ 1,635	\$ 1,317,709	\$ 11,117	\$ 8,960,423	\$ 12,752	\$ 10,278,132
2.2	Drilled Pier - 345KV SC Steel 3-Pole Deadend	90	EA	\$ 44,372	\$ 3,993,462	\$ 44,847	\$ 4,036,230	\$ 89,219	\$ 8,029,692
2.3	Drilled Pier - 345KV SC Steel 3-Pole Storm Deadend	36	EA	\$ 44,372	\$ 1,597,385	\$ 44,847	\$ 1,614,492	\$ 89,219	\$ 3,211,877
2.4									
2.5									
2.6									
2.7									
2.8	Rock Excavation Adder	1,342	СҮ	\$ -	\$ -	\$ 2,000	\$ 2,684,000	\$ 2,000	\$ 2,684,000
2.9									
2.10									
TOTAL - FOU	NDATIONS:				\$ 6,908,556		\$ 17,295,145		\$ 24,203,701
3. STRUCTUR	ES								
3.1	Direct Embed - 345kV SC 2-Pole Steel H-Frame - V-String - Tangent	403	Structure	\$ 42,550	\$ 17,147,650	\$ 25,530	\$ 10,288,590	\$ 68,080	\$ 27,436,240
3.2	Drilled Pier - 345KV SC Steel 3-Pole Deadend	30	Structure		\$ 1,565,100			\$ 83,472	
3.3	Drilled Pier - 345KV SC Steel 3-Pole Storm Deadend	12	Structure	\$ 52,170			\$ 375,624		
3.4				,		,	.,.		. , ,
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
3.5									
3.6									
3.7									
3.8	Remove Existing Foundation	50	EA	\$ -	\$ -	\$ 7,500	\$ 372,750	\$ 7,500	\$ 372,750
3.9	Remove Existing Structure and Accessories	994	EA	\$ -	\$ -	\$ 12,500	\$ 12,425,000	\$ 12,500	\$ 12,425,000
3.10	Install Grounding and Grounding Accessories	932	Pole	\$ 506	\$ 471,592	\$ 5,539	\$ 5,161,882	\$ 6,045	\$ 5,633,474
TOTAL - STRUC	CTURES:				\$ 19,810,382		\$ 29,562,906		\$ 49,373,288
4. CONDUCTO	R, SHIELDWIRE, OPGW								
4.1	345kV - (1) 954kcmil 54/7 ACSR "Cardinal" (Existing Structures 12.5 Miles)	2,241,994	LF	\$ 1.90	\$ 4,259,789	\$ 5.00	\$ 11,209,970	\$ 6.90	\$ 15,469,759
4.2	(1) OPGW 36 Fiber AC-33/38/571 (Existing Structures 12.5 Miles)	303,811	LF	\$ 1.35	\$ 410,145	\$ 5.00	\$ 1,519,055	\$ 6.35	\$ 1,929,200
4.3	(1) 3/8" EHS7 Steel (Existing Structures 12.5 Miles)	303,811	LF	\$ 0.47	\$ 142,791	\$ 5.00	\$ 1,519,055	\$ 5.47	\$ 1,661,846
4.4									
4.5									
4.6									
4.7	Remove Existing Conductor and Accessories	121.0	Mile	\$ -	\$ -	\$ 30,000	\$ 3,630,000	\$ 30,000.00	\$ 3,630,000
4.8	Remove Existing OPGW and Accessories	108.4	Mile	\$ -		\$ 12,000	\$ 1,300,800		\$ 1,300,800
4.9	Remove Existing OHSW and Accessories	108.4	Mile	\$ -	•	\$ 12,000	\$ 1,300,800	\$ 12,000.00	\$ 1,300,800
4.10		100.4	···iic	T	T	- 12,000	1,500,500	7 12,000.00	- 1,300,800
4.11									
4.11									
4.13									
									1
4.14									1
	Riday Relac (197 Legations)	02	Cot	ć 1.7F0	ć 163.7F0	ć 3.500	ć 22F F00	\$ 5,250.00	ć 400.3F0
4.16	Rider Poles (187 Locations)	93	Set	\$ 1,750	\$ 162,750 \$ -	\$ 3,500			\$ 488,250
4.17	Rider Poles - Relocated	94	Set	\$ -	\$ -	\$ 3,500	\$ 329,000	\$ 3,500.00	\$ 329,000
4.18									
4.19									
4.20	LISTOR CHILDREN COOK								
	UCTOR, SHIELDWIRE, OPGW:				\$ 4,975,475		\$ 21,134,180		\$ 26,109,655
	, FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	2,418	Assembly	\$ 1,800	\$ 4,352,400	\$ 720		\$ 2,520	\$ 6,093,360
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900	\$ -	\$ 560		\$ 1,460	\$ -
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	504	Assembly	\$ 1,800	\$ 907,200	\$ 720	\$ 362,880	\$ 2,520	\$ 1,270,080
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900	\$ -	\$ 560	\$ -	\$ 1,460	\$ -
5.5	OPGW Assembly - Tangent	403	Assembly	\$ 200	\$ 80,600	\$ 150	\$ 60,450	\$ 350	\$ 141,050
5.6	OPGW Assembly - Angle / DE	84	Assembly	\$ 250	\$ 21,000	\$ 150			\$ 33,600
5.7	OHSW Assembly - Tangent	403	Assembly	\$ 200	\$ 80,600	\$ 150	\$ 60,450	\$ 350	\$ 141,050
5.8	OHSW Assembly - Angle / DE	84	Assembly	\$ 250	\$ 21,000	\$ 150	\$ 12,600		\$ 33,600
5.9	OPGW Splice Boxes	27	Set	\$ 1,746	\$ 47,146	\$ 2,145	,	\$ 3,891	\$ 105,061
5.10	OPGW Splice & Test	27	EA	\$ 2,520	+	\$ 989			\$ 94,752
5.11	Spacer - Conductor	10,977	EA	\$ 50	\$ 548,850	\$ 35	\$ 384,195		\$ 933,045
5.12	Vibration Dampers - Conductor	2,635	EA	\$ 35	\$ 92,225	\$ 35			\$ 184,450
5.13	Shield wire / OPGW Dampers, Misc. Fittings	1,332	EA	\$ 27	\$ 35,964	\$ 35	\$ 46,620	\$ 62	\$ 82,584
5.14	Jumpers at Existing Structures (New Cable to Existing)	-	EA	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ 50,000	\$ -
5.15	Replace - Mono Pole Vertical Tangent (1-Group of 18-Bells Each Assembly)	480	Assembly	\$ 1,800	\$ 864,000	\$ 720	\$ 345,600	\$ 2,520	\$ 1,209,600
5.16	Replace - Dead-end & Angle Insulators (1, Group of 18-Bells Each Assembly)	195	Assembly	\$ 1,800	\$ 351,000	\$ 720	\$ 140,400	\$ 2,520	\$ 491,400
5.17	Guys, Anchors, and Accessories	-	EA	\$ 719	\$ -	\$ 883	\$ -	\$ 1,602	\$ -
5.18	Misc. materials (Signs and Markers)	67.2	Mile	\$ 770	\$ 51,744	\$ 1,006	\$ 67,603	\$ 1,776	\$ 119,347
5.19		-		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:				\$ 7,521,769		\$ 3,411,210		\$ 10,932,979
A. Transı	mission Line Edic to Princetown				\$ 39,291,432		\$ 108,663,945		\$ 147,955,377
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
	Contractor Modifization / Demodifization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 1,479,554	\$ 1,479,554	\$ 1,479,554	\$ 1,479,554

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Ma	terial Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 6,378,874	\$ 6,378,874	\$ 6,378,874	\$	6,378,874
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 1,479,554	\$ 1,479,554	\$ 1,479,554	\$	1,479,554
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 1,479,554	\$ 1,479,554	\$ 1,479,554	\$	1,479,554
	Engineering										
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 7,397,769	\$ 7,397,769	\$ 7,397,769	\$	7,397,769
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 443,866	\$ 443,866	\$ 443,866	\$	443,866
6.7	Geotech	67	Location	\$ -	\$	-	\$ 3,500	\$ 234,500	\$ 3,500	\$	234,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 1,035,688	\$ 1,035,688	\$ 1,035,688	\$	1,035,688
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 443,866	\$ 443,866	\$ 443,866	\$	443,866
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ 6,782,000	\$ 6,782,000	\$ 6,782,000	\$	6,782,000
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	
6.17	Compensation for use of 1 Ckt - NYPA Structures (92 Structures)	1	LS	\$ -	\$	-	\$ 8,919,123	\$ 8,919,123	\$ 8,919,123	\$	8,919,123
6.18	Sales Tax on Materials	1	LS	\$ 3,143,315	\$	3,143,315	\$ -	\$ -	\$ 3,143,315		3,143,315
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 147,955	\$ 147,955	\$ 147,955	\$	147,955
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				Ś	3,143,315		\$ 36,262,303		Ś	39,405,617

ITC - T031 - (Segment A) B. Transmission Line Princetown to Rotterdam

Estimate Revision: 5 Total: \$ 31,435,177

ITC - T031 - (Segmen	t A)			
		Supply	Installation	Total
B. Transmission Line Princetown to Rotterdam				
1. CLEARING & ACCESS	\$	2,250	\$ 4,182,670	\$ 4,184,920
2. FOUNDATIONS	\$	1,369,010	\$ 5,146,318	\$ 6,515,328
3. STRUCTURES	\$	4,480,770	\$ 5,315,291	\$ 9,796,061
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	773,826	\$ 2,903,455	\$ 3,677,281
5. INSULATORS, FITTINGS, HARDWARE	\$	1,365,652	\$ 629,084	\$ 1,994,736
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	639,321	\$ 4,627,531	\$ 5,266,851
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	8,630,828	\$ 22,804,349	\$ 31,435,177
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	8,630,828	\$ 22,804,349	\$ 31,435,177

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Transı	nission Line Princetown to Rotterdam								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	23.0	Acre	\$ -	\$ -	\$ 5,000	\$ 115,000	\$ 5,000	\$ 115,000
1.3	Access Road	5,280.0	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	26,400.0	LF	\$ -	\$ -	\$ 4	,	<u>'</u>	\$ 105,600
1.5	Matting - Access and ROW	21,120.0	LF	\$ -	\$ -	\$ 70			
	Matting - To Work Area	2,775.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	5.0	Mile	\$ -	\$ -	\$ 16,000			\$ 80,000
1.8	ROW Restoration	5.0	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	505,000.0	SF	\$ -	\$ -		\$ 1,777,600		\$ 1,777,600
1.10	Restoration for Work Pad areas	101,000.0	SF	\$ -	\$ -	\$ 0.2	, ,,,,,		\$ 15,150
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580		\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	29.0	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	3.0	EA	\$ 750	<u> </u>				
1.17	Concrete Washout Station	3.0	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
	ING & ACCESS:				\$ 2,250		\$ 4,182,670		\$ 4,184,920
2. FOUNDATIO									
2.1	Direct Embed - 345kV SC 2-Pole Steel H-Frame - V-String - Tangent	186	EA	\$ 1,635	\$ 304,087	\$ 11,117	\$ 2,067,790	\$ 12,752	\$ 2,371,877
2.2	Drilled Pier - 345KV SC Steel 3-Pole Deadend	18	EA	\$ 44,372	\$ 798,692	\$ 44,847	\$ 807,246	\$ 89,219	\$ 1,605,938
2.3	Drilled Pier - 345KV SC Steel 3-Pole Storm Deadend	6	EA	\$ 44,372	\$ 266,231	\$ 44,847	\$ 269,082	\$ 89,219	\$ 535,313
2.4									
2.5	Rock Excavation Adder	1,001.1	CY	\$ -	\$ -	\$ 2,000	\$ 2,002,200	\$ 2,000	\$ 2,002,200
2.6									
2.7									
2.8									
TOTAL - FOUN	DATIONS:				\$ 1,369,010		\$ 5,146,318		\$ 6,515,328
3. STRUCTURE					7,505,010		9 3,143,316		Ç 0,313,320
3.1	Direct Embed - 345kV SC 2-Pole Steel H-Frame - V-String - Tangent	93	Structure	\$ 42,550	\$ 3,957,150	\$ 25,530	\$ 2,374,290	\$ 68,080	\$ 6,331,440
3.2	Drilled Pier - 345KV SC Steel 3-Pole Deadend	6	Structure	, , , , , , , , , , , , , , , , , , , ,					\$ 500,832
		Ů							
3.3	Drilled Pier - 345KV SC Steel 3-Pole Storm Deadend	2	Structure	\$ 52,170	\$ 104,340	\$ 31,302	\$ 62,604	\$ 83,472	\$ 166,944
3.4									
3.5									
3.6									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.7	Remove Existing Foundation	22	EA	\$ -	\$ -	\$ 7,500	\$ 165,000	\$ 7,500	\$ 165,000
3.8	Remove Existing Structure and Accessories	109	EA	\$ -	\$ -	\$ 12,500	\$ 1,362,500	\$ 12,500	\$ 1,362,500
3.9	•					,	, ,	· · · · · · · · · · · · · · · · · · ·	, ,
\vdash	Install Grounding and Grounding Accessories	210	Pole	\$ 506	\$ 106,260	\$ 5,539	\$ 1,163,085	\$ 6,045	\$ 1,269,345
	TURES PRINCTOWN TO NEW SCOTLAND:	210	T OIC	300	\$ 4,480,770	3,333	\$ 5,315,291	ý 0,043	\$ 9,796,061
	R, SHIELDWIRE, OPGW				1,100,770		ψ 5,515,251		<i>ϕ</i> 3,730,000
	345kV - (1) 954kcmil 54/7 ACSR "Cardinal"	339,293	LF	\$ 1.90	\$ 644,657	\$ 5.00	\$ 1,696,465	\$ 6.90	\$ 2,341,122
4.2	(1) OPGW 36 Fiber AC-33/38/571	56,549	LF	\$ 1.35	\$ 76,341	\$ 5.00	\$ 282,745	\$ 6.35	\$ 359,086
4.3	(1) 3/8" EHS7 Steel	56,549	LF	\$ 0.47	\$ 26,578	\$ 5.00	\$ 282,745	\$ 5.47	\$ 309,323
4.5	Remove Existing Conductor and Accessories	10.0	Mile	\$ -	\$ -	\$ 30,000	\$ 300,000	\$ 30,000.00	\$ 300,000
4.6	Remove Existing OPGW and Accessories	10.0	Mile	\$ -	\$ -	\$ 12,000	\$ 120,000		\$ 120,000
4.7	Remove Existing OHSW and Accessories	10.0	Mile	\$ -	\$ -	\$ 12,000		\$ 12,000.00	\$ 120,000
\vdash	Rider Poles	15	Set	\$ 1,750	т	\$ 3,500		\$ 5,250.00	\$ 78,750
	Rider Poles - Relocated	14	Set	\$ 1,730	\$ 20,230	\$ 3,500	\$ 49,000	\$ 3,500.00	\$ 49,000
	ICTOR, SHIELDWIRE, OPGW:	14	Jet	· -	\$ 773,826	3,300	\$ 2,903,455	\$ 3,300.00	\$ 3,677,281
	FITTINGS, HARDWARE				3 773,820		\$ 2,503,433		3 3,077,263
	345kV Tangent (1-Group of 18-Bells Each Assembly)	558	Assembly	\$ 1,800	\$ 1,004,400	\$ 720	\$ 401,760	\$ 2,520	\$ 1,406,160
	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900	\$ -	\$ 560		\$ 1,460	\$ -
		96	Assembly	\$ 1,800	\$ 172,800	\$ 720	<u> </u>		\$ 241,920
-	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)		· · · · · · · · · · · · · · · · · · ·	-					
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900		\$ 560		\$ 1,460	\$ -
	OPGW Assembly - Tangent	93	Assembly	\$ 200			\$ 13,950	\$ 350	\$ 32,550
	OPGW Assembly - Angle / DE	16	Assembly	\$ 250	\$ 4,000	-	,	\$ 400	\$ 6,400
	OHSW Assembly - Tangent	93	Assembly	\$ 200	\$ 18,600		\$ 13,950	\$ 350	\$ 32,550
	OHSW Assembly - Angle / DE	16	Assembly	\$ 250	\$ 4,000	-	\$ 2,400	\$ 400	\$ 6,400
5.9	OPGW Splice Boxes	8	Set	\$ 1,750	\$ 14,000	\$ 1,746	\$ 13,969	\$ 3,496	\$ 27,969
5.10	OPGW Splice & Test	8	EA	\$ 1,400	\$ 11,200	\$ 2,520	\$ 20,160	\$ 3,920	\$ 31,360
5.11	Spacer - Conductor	1,919	EA	\$ 50	\$ 95,950	\$ 35	\$ 67,165	\$ 85	\$ 163,115
5.12	Vibration Dampers - Conductor	432	EA	\$ 35	\$ 15,120	\$ 35	\$ 15,120	\$ 70	\$ 30,240
5.13	Shieldwire / OPGW Dampers, Misc. Fittings	116	EA	\$ 27	\$ 3,132	\$ 35	\$ 4,060	\$ 62	\$ 7,192
5.14	Jumpers at Existing Structures (New Cable to Existing)	-	EA	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ 50,000	\$ -
5.15	Guys, Anchors, and Accessories	-	EA	\$ 719	\$ -	\$ 883	\$ -	\$ 1,602	\$ -
	Misc. materials (Signs and Markers)	5.0	Mile	\$ 770	\$ 3,850	\$ 1,006	\$ 5,030	\$ 1,776	\$ 8,880
	ATORS, FITTINGS, HARDWARE:				\$ 1,365,652	, , , , , , , , , , , , , , , , , , , ,	\$ 629,084		\$ 1,994,736
B. Transn	nission Line Princetown to Rotterdam				\$ 7,991,508		\$ 18,176,818		\$ 26,168,326
6. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS								
	Contractor Mobilization / Demobilization								
	Mob / Demob	1	LS	\$ -	\$ -	\$ 261,683	\$ 261,683	\$ 261,683	\$ 261,683
6.2	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and	1	LS			\$ 1,128,208	\$ 1,128,208	\$ 1,128,208	\$ 1,128,208
	Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 261,683			
	Utility PM and Project Oversite Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 261,683			
	Engineering	1	LJ	-	-	201,083	201,083	y 201,065	y 201,083
	Design Engineering	1	LS	\$ -	\$ -	\$ 1,308,416	\$ 1,308,416	\$ 1,308,416	\$ 1,308,416
	LiDAR	1	LS	s -	\$ -	\$ 78,505	, , ,	\$ 78,505	\$ 78,505
	Geotech	5	Location	\$ -	\$ -	\$ 3,500	\$ 17,500		\$ 17,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 183,178	\$ 183,178	\$ 183,178	\$ 183,178
	Testing & Commissioning								
	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs	_	ıc	ć	ć	ć	ć	ć	
	Environmental Licensing & Permitting Costs		LS LS	\$ -	\$ -	\$ -			\$ -
	Environmental Mitigation Warranties / LOC's	- 1	LS	\$ -	\$ -	\$ 78,505			
	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	· · · · · · · · · · · · · · · · · · ·			
	near Estate Costs (NEW NOW)	1	LS	1 7	\$ -	I ~	1 ⁻	· -	· -

Item	item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$	639,321	\$ 639,321	\$ -	\$ -	\$ 639,321	\$ 639,321
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 26,168	\$ 26,168	\$ 26,168	\$ 26,168
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 639,321		\$ 4,627,531		\$ 5,266,851

C. Transmission Line Princetown to New Scotland

ITC - T031 - (Segment A)

Estimate Revision:

5 Total: \$ 76,758,803

ITC - T031 - (Segment A)			
	Supply	Installation	Total
C. Transmission Line Princetown to New Scotland			
1. CLEARING & ACCESS	\$ 31,000	\$ 11,532,694	\$ 11,563,694
2. FOUNDATIONS	\$ 5,878,220	\$ 6,905,973	\$ 12,784,193
3. STRUCTURES	\$ 10,575,689	\$ 10,875,263	\$ 21,450,952
4. CONDUCTOR, SHIELDWIRE, OPGW	\$ 2,759,967	\$ 8,977,795	\$ 11,737,762
5. INSULATORS, FITTINGS, HARDWARE	\$ 3,933,818	\$ 1,753,268	\$ 5,687,086
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ 1,854,296	\$ 11,680,821	\$ 13,535,116
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ 25,032,990	\$ 51,725,813	\$ 76,758,803
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ 25,032,990	\$ 51,725,813	\$ 76,758,803

Description	of Work:								
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Trans	mission Line Princetown to New Scotland								
1. CLEARING	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	26.0	Acre	\$ -	\$ -	\$ 15,000	\$ 390,000	\$ 15,000	\$ 390,000
1.2	Clearing the ROW - Light (mowing)	62.0	Acre	\$ -	\$ -	\$ 5,000		,	\$ 310,000
1.3	Access Road	20,803.2	LF	\$ -	7	\$ 45			
1.4	Silt Fence	104,016.0	LF	\$ -		\$ 4			,
1.5	Matting - Access and ROW	83,212.8	LF	\$ -	т	\$ 70			
1.6	Matting - To Work Area	3,375.0	LF	\$ -	7	\$ 70			
1.7	Snow Removal	19.7	Mile	\$ -	т	\$ 16,000	\$ 315,200		\$ 315,200
1.8	ROW Restoration	19.7	Mile	\$ -	\$ -	\$ 10,000	\$ 197,000		
1.9	Work Pads	725,000	SF	\$ - \$ -	\$ -	\$ 4 \$ 0.2	\$ 2,552,000		
1.10	Restoration for Work Pad areas	145,000	SF	7	7	7	\$ 21,750		
1.11	Temporary Access Bridge Air Bridge	- 2	EA EA	\$ - \$ -	\$ - \$ -	\$ 20,035 \$ 14,445	\$ -	T,	\$ - \$ 28,890
1.12	Stabilized Construction Entrance		EA	\$ -	\$ - \$ -	\$ 4,580	\$ 28,890		\$ 28,890
1.13	Maintenance and Protection of Traffic on Public Roads	50	EA EA	\$ -	\$ -	\$ 4,130	\$ 206,500		
1.15	Gates	11	EA	\$ 2,000	\$ 22,000	\$ 2,500	\$ 200,300		\$ 49,500
1.16	Culverts / Misc. Access	12	EA	\$ 750		\$ 1,250	\$ 15,000		\$ 24,000
1.17	Concrete Washout Station	30	EA	\$ -	\$ -	\$ 1,850	\$ 55,500	\$ 1,850	\$ 55,500
	RING & ACCESS:	30	27,	Ţ	\$ 31,000	Ţ <u>1,030</u>	\$ 11,532,694	7 2,030	\$ 11,563,694
2. FOUNDATI	ONS				, ,,,,,,		, , , , , , ,		, , , , , ,
2.1	Drilled Pier - 345KV DC Steel Mono-Pole Delta - V-String - Tangent	131	EA	\$ 26,483	\$ 3,469,324	\$ 26,767	\$ 3,506,479	\$ 53,250	\$ 6,975,803
2.2	Drilled Pier - 345KV DC Steel 2-Pole Delta - Deadend	20	EA	\$ 86,032	\$ 1,720,640	\$ 86,953	\$ 1,739,067	\$ 172,985	\$ 3,459,707
2.3	Drilled Pier - 345KV DC Steel 2-Pole Delta Storm - Deadend	8	EA	\$ 86,032	\$ 688,256	\$ 86,953	\$ 695,627	\$ 172,985	\$ 1,383,883
2.4									
2.5	Rock Excavation Adder	482.4	СУ	\$ -	\$ -	\$ 2,000	\$ 964,800	\$ 2,000	\$ 964,800
2.6									
2.7									
2.8									
2.9									
2.10									
TOTAL - FOUR					\$ 5,878,220		\$ 6,905,973		\$ 12,784,193
3. STRUCTUR								,	
3.1	Drilled Pier - 345KV DC Steel Mono-Pole Delta - V-String - Tangent	131	Structure				\$ 5,423,793		\$ 14,463,448
3.2	Drilled Pier - 345KV DC Steel 2-Pole Delta - Deadend	10	Structure	\$ 103,970			\$ 623,820		\$ 1,663,520
3.3	Drilled Pier - 345KV DC Steel 2-Pole Delta Storm - Deadend	4	Structure	\$ 103,970	\$ 415,880	\$ 62,382	\$ 249,528	\$ 166,352	\$ 665,408
3.4		1							

1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
13	3.5	Remove Existing Foundation	348	EA	\$ -	\$ -	\$ 7,500	\$ 2,610,000	\$ 7,500	\$ 2,610,000
1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50		Remove Existing Structure and Accessories	87	EA	\$ -	\$ -	\$ 12,500	\$ 1,087,500	\$ 12,500	\$ 1,087,500
3.5		Install Grounding and Grounding Accessories	159	Pole	\$ 506	\$ 80.454	\$ 5,539	\$ 880.622	\$ 6.045	\$ 961,076
211					7	7 307.0	7 0,000	7 331,033	9,0.0	7 232,017
132										
3.11										
3.15										
2.13										
3.17										
3.18										
1.70	3.17									
3.20										
TOTAL_COMMUNICATION SHIREDWINE, OPEN										
A		TIDEC				ć 10 F7F 690		ć 10.07F.262		ć 21.4F0.0F2
4.1 3459Y-(1)\$546-00-0947-(2)\$640-0947-(2)\$640-0947-(2)\$6 5.00 5 6.051-558 5.00 5 5.145-50 6.051-558 5.00 5 5.145-50 6.051-558 5.00 5 5.145-50 6.051-558 5.00 5 5.145-50 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558 6.051-558						\$ 10,575,689		\$ 10,875,263		\$ 21,450,952
4.2 (1) OPROW 36 Piber AC 38/38/571 (10.00%) 4.3 (1) NAP Fiber AC 38/38/571 (10.00%) 4.3 (1) NAP Fiber AC 38/38/571 (10.00%) 4.4 (10.00%) 4.5 (10.00%) 4.5 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.6 (10.00%) 4.7 (10.00%) 4.8 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00%) 4.9 (10.00			1 323 907	1E	\$ 1.90	\$ 2515423	\$ 5.00	\$ 6,619,535	\$ 6.90	\$ 9.134.958
11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 11.000 1						7 -,0-0,1-0				
4-5 Remove Existing Christor and Accessories 20.0 Mile 5	4.2	(1) OPGW 36 Fiber AC-33/38/571	110,326	LF	\$ 1.35	\$ 148,940	\$ 5.00	\$ 551,630	\$ 6.35	\$ 700,570
4.5 Remove Esting OPEN and Accessories		(1) 3/8" EHS7 Steel			\$ 0.47					
A	4.4	Remove Existing Conductor and Accessories	20.0	Mile	\$ -			\$ 600,000		
## 12 Bide Priles - Relocated 25 EA \$ 1,750 \$ 43,750 \$ 13,500 \$ 87,000 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,00 \$ 3,300,0	4.5	Remove Existing OPGW and Accessories		Mile		'	7,			
4.8 Rither Poles - Relocated 25 Set 5 . 5 . 3,500 \$ 87,500 \$ 3,500.00 \$ 87,500 \$ 47,500 \$ 3,500.00 \$ 87,500 \$ 4,000 \$ 4.00 \$ 4.00 \$ 4.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00					T	'	, , , , , , , , , , , , , , , , , , , ,			
4.9		Rider Poles				,				
1.10		Rider Poles - Relocated	25	Set	\$ -	\$ -	\$ 3,500	\$ 87,500	\$ 3,500.00	\$ 87,500
S 2,759,60 S 8,977,79 S 11,737,76										
S.INSUATOR, FITTINGS, HARDWARE										
5.1 345kV Tangent (1.5 croup of 1.9 tells ach Assembly 1.577 Assembly 5 1.800 5 2.829.600 5 770 5 1.131.840 5 2.200 5 3.961.444						\$ 2,759,967		\$ 8,977,795		\$ 11,737,762
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S.8 OHSW Assembly - Angle / DE 28 Assembly S 250 S 7,000 S 1.50 S 4,00 S 4.00 S 1.1,200										
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S.12 Vibration Dampers - Conductor 1,573 EA \$ 35 \$ 55,055 \$ 33 \$ 55,055 \$ 70 \$ 110,111		·								
5.13 Shieldwire / OPGW Dampers, Misc. Fittings 398 EA \$ 27 \$ 10,746 \$ 33 \$ 13,930 \$ 62 \$ 24,676 \$ 5.14 Guys, Anchors, and Accessories - EA \$ 719 \$ - \$ 883 \$ - \$ 1,600 \$ - \$ 5.15 Misc. materials (Signs and Markers) 19.7 Mille \$ 770 \$ 15,169 \$ 1,006 \$ 19,818 \$ 1,776 \$ 34,987 \$ 5.16 Jumpers at Existing Structures (New Cable to Existing) - EA \$ 25,000 \$ - \$ 25,000 \$ - \$ 5,000 \$ - \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,687,088 \$ 5,6										
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5.16 Jumpers at Existing Structures (New Cable to Existing)	5.14	Guys, Anchors, and Accessories	-	EA	\$ 719	\$ -	\$ 883	\$ -	\$ 1,602	\$ -
TOTAL - INSULATORS, FITTINGS, HARDWARE: \$ 3,933,818 \$ 1,753,268 \$ 5,687,084 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,684 \$ 63,223,6	5.15	Misc. materials (Signs and Markers)	19.7	Mile	\$ 770	\$ 15,169	\$ 1,006	\$ 19,818	\$ 1,776	\$ 34,987
C. Transmission Line Princetown to New Scotland 6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demo	5.16	Jumpers at Existing Structures (New Cable to Existing)	-	EA	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ 50,000	\$ -
Contractor Mobilization / Demobilization / Demobilization LS \$ - \$ - \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 6	TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:				\$ 3,933,818		\$ 1,753,268		\$ 5,687,086
Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilizati	C. Transr	nission Line Princetown to New Scotland				\$ 23,178,694		\$ 40,044,992		\$ 63,223,686
6.1 Mob / Demob Project Management, Material Handling & Amenities 6.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 1 LS \$ - \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,7	6. MOB/DEMC	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
Project Management, Material Handling & Amenities		Contractor Mobilization / Demobilization								
6.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 1 LS \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,794 \$ 2,725,	6.1		1	LS	\$ -	\$ -	\$ 632,237	\$ 632,237	\$ 632,237	\$ 632,237
6.2 Wanager, SHEQ Staff, and Admin Staff) 6.3 Utility PM and Project Oversite 6.4 Site Accommodation, Facilities, Storage 6.4 Site in Accommodation, Facilities, Storage 6.5 Utility PM and Project Oversite 1 LS \$ - \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,2										
6.3 Utility PM and Project Oversite 1 LS \$ - \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$	6.2		1	LS			\$ 2,725,794	\$ 2,725,794	\$ 2,725,794	\$ 2,725,794
6.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ - \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237 \$ 632,237	6.3		4	10		ė	\$ 622.227	\$ 622.227	\$ 622.227	\$ 622.227
Engineering Engineering					c .					
	0.4		1		-		پ (32,23 <i>1</i>	y 032,237	y 032,237	7 032,237
1 το ο με ει το ο το το το το το το το το το το το τ	6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 3,161,184	\$ 3,161,184	\$ 3,161,184	\$ 3,161,184

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.6	Lidar	1	LS	\$ -	\$ -	\$ 189,671	\$ 189,671	\$ 189,671	\$ 189,671
6.7	Geotech	20	Location	\$ -	\$ -	\$ 3,500	\$ 70,000	\$ 3,500	\$ 70,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 442,566	\$ 442,566	\$ 442,566	\$ 442,566
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 189,671	\$ 189,671	\$ 189,671	\$ 189,671
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ 215,000	\$ 215,000	\$ 215,000	\$ 215,000
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 2,687,000	\$ 2,687,000	\$ 2,687,000	\$ 2,687,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 1,854,296	\$ 1,854,296	\$ -	\$ -	\$ 1,854,296	\$ 1,854,296
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 63,224	\$ 63,224	\$ 63,224	\$ 63,224
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,854,296		\$ 11,680,821		\$ 13,535,116

ITC - T031 - (Segment A) D. Rotterdam Substation - Install

Estimate Revision: 5 Total: \$ 24,565,575

ITC - T031 - (Segme	nt A)			
		Supply	Installation	Total
D. Rotterdam Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	189,890	\$ 2,766,050	\$ 2,955,940
2. SUBSTATION FOUNDATIONS	\$	1,035,342	\$ 1,108,800	\$ 2,144,142
3. SUBSTATION STRUCTURES	\$	432,900	\$ 432,900	\$ 865,800
4. MAJOR EQUIPTMENT	\$	7,515,000	\$ 1,820,000	\$ 9,335,000
5. SMALL EQUIPTMENT / MATERIALS	\$	673,000	\$ 333,000	\$ 1,006,000
6. CONTROL HOUSE / PANELS	\$	893,900	\$ 818,900	\$ 1,712,800
7. MISC ITEMS	\$	744,510	\$ 1,040,740	\$ 1,785,250
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	918,763	\$ 3,841,880	\$ 4,760,643
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	12,403,305	\$ 12,162,270	\$ 24,565,575
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	12,403,305	\$ 12,162,270	\$ 24,565,575

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Rotte	rdam Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	1.3	ACRES	\$	-	\$ -	\$ 1,300,000	\$ 1,625,000	\$ 1,300,000	\$ 1,625,000
1.2	Station stone within substation fence.	1,170	CY	\$	27	\$ 31,590	\$ 75	\$ 87,750	\$ 102	\$ 119,340
1.3	Substation Fence	1,100	LF	\$	100	\$ 110,000	\$ 100	\$ 110,000	\$ 200	\$ 220,000
1.4	Permanent Access Road - 20'-Wide (From Gordon RD)	1,380	LF	\$	35	\$ 48,300	\$ 285	\$ 393,300	\$ 320	\$ 441,600
1.5										
1.6										
1.7	Natural Gas Transmission Line Relocation	1	LS	\$	-		\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL					\$ 189,890		\$ 2,766,050		\$ 2,955,940
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	3	EA	\$	14,940	\$ 44,820	\$ 16,000	\$ 48,000	\$ 30,940	\$ 92,820
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$	26,145	\$ 209,160	\$ 28,000	\$ 224,000	\$ 54,145	\$ 433,160
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	40	EA	\$	4,482	\$ 179,280	\$ 4,800	\$ 192,000	\$ 9,282	\$ 371,280
2.1f	Station Service Transformer Stand Foundation	4	EA	\$	4,482	\$ 17,928	\$ 4,800	\$ 19,200	\$ 9,282	\$ 37,128
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	14	EA	\$	4,482	\$ 62,748	\$ 4,800	\$ 67,200	\$ 9,282	\$ 129,948
2.1j	Instrument Transformer Stand Foundations	18	EA	\$	4,482	\$ 80,676	\$ 4,800	\$ 86,400	\$ 9,282	\$ 167,076
2.1k	Arrester Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1m	Wave Trap Stand Foundations	2	EA	\$	4,482	\$ 8,964	\$ 4,800	\$ 9,600	\$ 9,282	\$ 18,564
2.1n	Misc. Structure Foundations		EA.	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	e Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	1	EA	\$ 11,9					
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,8	_	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,4		\$ 24,000	\$ -	\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,4	_	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	8	EA	\$ 3,7			\$ 32,000	\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,7	<u> </u>	\$ 4,000		\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -		\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	9	EA	\$ 3,7			\$ 36,000	\$ 7,735	
2.2j	Instrument Transformer Stand Foundations	3	EA	\$ 3,7			\$ 12,000	\$ 7,735	\$ 23,205
2.2k	Arrester Stand Foundations	0	EA	\$ 3,7	_	\$ 4,000	\$ -	\$ 7,735	
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,7	_	\$ 4,000		\$ 7,735	
2.2n	Misc. Structure Foundations		EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,2		\$ 5,600		\$ 10,829	
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,6	_	\$ 36,000		\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 16,4			\$ 70,400		\$ 136,136
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,4	_	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	4	EA	\$ 2,9	8 \$ 11,952	\$ 3,200	\$ 12,800	\$ 6,188	\$ 24,752
2.3f	Fuse Stand Foundations	0	EA	\$ 2,9		\$ 3,200		\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,9	8 \$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,9		\$ 3,200	\$ -	\$ 6,188	\$ -
2.3j	Instrument Transformer Stand Foundations	6	EA	\$ 2,9	8 \$ 17,928	\$ \$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3k	Arrester Stand Foundations	6	EA	\$ 2,9	8 \$ 17,928	\$ \$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,9	8 \$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	2	EA	\$ 97,1				\$ 201,110	
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,7	_	\$ 80,000	\$ -	\$ 154,700	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad					4			
2.5a	Control House / Pad	0	EA	\$ 76,1	_	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,0	0 \$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations						4		A 94
	70' Lightning Mast Foundation	2	EA		9 \$ 10,458	_			
2.6b				\$ -		\$ -	\$ -		\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ 1,035,342		\$ 1,108,800		\$ 2,144,142
	N STRUCTURES								
3.1	345kV		F.	6 2==	0 0 71.55		A 74.655	A 71.555	A
3.1a	Substation A-Frame Structures - Stand alone	2	EA	\$ 37,0	0 \$ 74,000	\$ 37,000	\$ 74,000	\$ 74,000	\$ 148,000

Item	Item Description E	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$	37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$	-
3.1c	Switch Stands	8	EA	\$	14,800	\$ 118,400	\$ 14,800	\$ 118,400	\$ 29,600	\$	236,800
3.1d	Station Service Transformer Stand	1	EA	\$	14,800	\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$	29,600
3.1e	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
3.1f	Bus Support 1 Ph	14	EA	\$	3,700	\$ 51,800	\$ 3,700	\$ 51,800	\$ 7,400	\$	103,600
3.1g	Instrument Transformer Stand	18	EA	\$	1,850	\$ 33,300	\$ 1,850	\$ 33,300	\$ 3,700	\$	66,600
3.1h	Arrester Stand	6	EA	\$	1,850	\$ 11,100	\$ 1,850	\$ 11,100	\$ 3,700	\$	22,200
3.1j	Wave Trap Stand	2	EA	\$	7,400	\$ 14,800	\$ 7,400	\$ 14,800	\$ 14,800	\$	29,600
3.1k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.2	230kV										
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$	33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$	33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2c	Switch Stands	2	EA	\$	12,025	\$ 24,050	\$ 12,025	\$ 24,050	\$ 24,050	\$	48,100
3.2d	Station Service Transformer Stand	0	EA	\$	12,025	\$ -	\$ 12,025	\$ -	\$ 24,050	\$	-
3.2e	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
3.2f	Bus Support 1 Ph	9	EA	\$	2,775	\$ 24,975	\$ 2,775	\$ 24,975	\$ 5,550	\$	49,950
3.2g	Instrument Transformer Stand	3	EA	\$	1,295	\$ 3,885	\$ 1,295	\$ 3,885	\$ 2,590	\$	7,770
3.2h	Arrester Stand	0	EA	\$	1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$	-
3.2j	Wave Trap Stand	0	EA	\$	5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$	-
3.2k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.3	115kV										
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$	18,500	\$ 37,000	\$ 18,500	\$ 37,000	\$ 37,000	\$	74,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$	-
3.3c	Switch Stands	2	EA	\$	7,955	\$ 15,910	\$ 7,955	\$ 15,910	\$ 15,910	\$	31,820
3.3d	Fuse Stand	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$	-
3.3e	Bus Support 3ph	0	EA	\$	3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$	-
3.3f	Bus Support 1 Ph	0	EA	\$	1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$	-
3.3g	Instrument Transformer Stand	6	EA	\$	740		\$ 740	\$ 4,440	\$ 1,480	\$	8,880
3.3h	Arrester Stand	6	EA	\$	740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$	8,880
3.3j	Wave Trap Stand	0	EA	\$	3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$	-
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
							<u> </u>				
TOTAL - SUBST	TATION STRUCTURES					\$ 432,900		\$ 432,900		Ś	865,800
4. MAJOR EQU						1 7/1		7			
4.1	345kV										
4.1a	Circuit Breakers	3	EA	\$	200,000	\$ 600,000	\$ 80,000	\$ 240,000	\$ 280,000	\$	840,000
4.1b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.1c	345 kV - 230 kV Auto Transformer	2	EA	\$	3,400,000	\$ 6,800,000	\$ 750,000	\$ 1,500,000	\$ 4,150,000	\$	8,300,000
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	3,400,000	\$ -	\$ 750,000	\$ -	\$ 4,150,000	\$	-
4.2	230kV										
4.2a	Circuit Breakers	1	EA	\$	115,000	\$ 115,000	\$ 80,000	\$ 80,000	\$ 195,000	\$	195,000
4.2b	Capacitor Banks	0	EA	\$	-	_	\$ 80,000		\$ 80,000	-	-
							· · · · · · · · · · · · · · · · · · ·		,		
4.3	115kV										
4.3a	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$	
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000		\$ 60,000		-
							,		,		
TOTAL - MAJO	R EQUIPTMENT					\$ 7,515,000		\$ 1,820,000		\$	9,335,000
	PTMENT / MATERIALS					, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		. 1,020,000		_	2,333,030

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
5.1	345kV										
5.1a	Line Switches - 3ph w/ motor operator	2	EA	\$	40,000	\$ 80,000	\$ 15,000	\$ 30,000	\$ 55,000	\$	110,000
5.1b	Disconnect Switches - 3ph w/ manual operator	6	EA	\$	35,000	\$ 210,000	\$ 17,500	\$ 105,000	\$ 52,500	\$	315,000
5.1c	VT'S	6	EA	\$	25,000	\$ 150,000	\$ 12,000	\$ 72,000	\$ 37,000	\$	222,000
5.1d	CT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.1e	CCVT'S	6	EA	\$	13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$	126,000
5.1f	Arresters	6	EA	\$	6,500	\$ 39,000	\$ 1,500	\$ 9,000	\$ 8,000	\$	48,000
_	Wave Traps	2	EA	\$	13,000	\$ 26,000		\$ 16,000	\$ 21,000	\$	42,000
	Station Service Transformers	0	EA	\$	200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$	-
5.1j											
	230kV						*				
	Line Switches - 3ph w/ motor operator	0	EA	\$	35,000		\$ 15,000	\$ -	\$ 50,000	-	-
	Disconnect Switches - 3ph w/ manual operator	2	EA	\$	30,000	\$ 60,000	\$ 17,500	\$ 35,000	\$ 47,500	\$	95,000
	VT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
	CT'S	0	EA	\$	13,000		\$ 8,000	\$ -	\$ 21,000	\$	-
	CCVT'S	3	EA	\$	10,000	\$ 30,000	\$ 6,000	7 10,000	\$ 16,000 \$ 11,000	\$	48,000
	Arresters	0	EA	<u> </u>	5,000	\$ -	\$ 6,000	\$ -	7,	\$	
$\overline{}$	Wave Traps	0	EA	\$	13,000	\$ - \$ -	\$ 8,000 \$ -	\$ - \$ -	\$ 21,000 \$ -	\$	-
	Station Service Transformers	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	>	
5.2j											
5.3	115kV										
	Line Switches - 3ph w/ motor operator	0	EA	\$	33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$	
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$	-
	VT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	
	CT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
	CCVT'S	0	EA	\$	8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$	-
	Arresters	0	EA	\$	3,420	\$ -	\$ 6,000	\$ -	\$ 9,420	Ś	
	Wave Traps	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	Ś	
\vdash	Station Service Transformers	0	EA	\$	_	\$ -	\$ -	\$ -	\$ -	Ś	-
	Fuses	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	Ś	
				1		,	*	*	*		
TOTAL - SMALL	EQUIPTMENT / MATERIALS					\$ 673,000		\$ 333,000		Ś	1,006,000
	DUSE / PANELS / GENERATOR					7 3.3,535		7 333,333		7	_,,,,,,,,,
	CONTROL HOUSE	0	EA	\$	-	\$ -	\$ 85,000	\$ -	\$ 85,000	\$	
	Protection and Telecom Equipment Panels	8	EA	\$	35,000	\$ 280,000	\$ 10,000	\$ 80,000		\$	360,000
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	ė -	\$ 100,000	Ś	
	Control Cables	1	LS	\$	438,900	\$ 438,900	\$ 25,000	\$ 438,900	\$ 877,800	\$	877,800
	SCADA and Communications	1	EA EA	\$	75,000	\$ 438,900	\$ 438,900	\$ 438,900	\$ 175,000	\$	175,000
	Low Voltage AC Distribution	1	EA	\$		\$ 75,000			\$ 175,000	\$	150,000
	DC Distribution System	1	EA	\$	50,000	\$ 50,000	\$ 100,000	\$ 100,000	\$ 150,000	\$	150,000
\vdash	Security	0	EA	\$	7,500	\$ -	\$ 7,500	\$ 100,000	\$ 15,000	Ś	-
	Fire Alarm	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	
	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	Ś	
				Ė	,	-				-	
TOTAL - CONTR	OL HOUSE / PANELS / GENERATOR					\$ 893,900		\$ 818,900		\$	1,712,800
7. MISC ITEMS											

Item	ltem Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
7.1	Conduit & Cable Trench System	1,400	LF	\$	185.00	\$ 259,000	\$ 170.00	\$ 238,000	\$ 355	\$ 497,000
7.2	Rigid Bus, Fittings & Insulators	1,000	LF	\$	125.07	\$ 125,070	\$ 237.10	\$ 237,100	\$ 362	\$ 362,170
7.3	Strain Bus, Connectors & Insulators	0	LF	\$	39.30	\$ -	\$ 53.35	\$ -	\$ 93	\$ -
7.4	Grounding System	8,000	LF	\$	6.93	\$ 55,440	\$ 32.58	\$ 260,640		\$ 316,080
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000		\$ 1,050	\$ -		\$ -
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400		\$ 750	\$ -	. ,	\$ -
7.7	Strain Bus Insulators - 115kV	0	EA	\$	1,000			\$ -		\$ -
7.8	Low Voltage AC Station Service	0	LS	\$	50,000	\$ -	\$ 75,000	\$ -	\$ 125,000	\$ -
7.9	SSVT Service	0	LS	\$	45,000		\$ 45,000	\$ -		\$ -
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$ 250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$ 360,000
7.12										
7.13										
7.14										
7.15										
7.16										
7.17										
7.18										
7.19										
7.20										
TOTAL - MISC	ITEMS					\$ 744,510		\$ 1,040,740		\$ 1,785,250
D. Rotte	rdam Substation - Install					\$ 11,484,542		\$ 8,320,390		\$ 19,804,932
8. MOB/DEM	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
8.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 198,049	\$ 198,049	\$ 198,049	\$ 198,049
	Project Management, Material Handling & Amenities									
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 853,860	\$ 853,860	\$ 853,860	\$ 853,860
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 198,049	\$ 198,049	\$ 198,049	\$ 198,049
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 198,049	\$ 198,049	\$ 198,049	\$ 198,049
	Engineering									
8.5	Design Engineering	1	LS	\$		\$ -	\$ 1,584,395	\$ 1,584,395	\$ 1,584,395	\$ 1,584,395
8.6	LIDAR	-	LS	\$	-	\$ -	\$ -	\$ -		\$ -
8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$ 14,000
8.8	Surveying/Staking	1	Site	s	-	\$ -	\$ 138,635	\$ 138,635		\$ 138,635
	Testing & Commissioning						· · · · · · · · · · · · · · · · · · ·	,	,	
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 495,123	\$ 495,123	\$ 495,123	\$ 495,123
	Permitting and Additional Costs	_	-	1			,:==		, =	,
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$		\$ -				\$ -
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 59,415			
8.13	Real Estate Costs (New)	-	LS	\$			\$ -			\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-		\$ 82,500			
8.15	Legal Fees	-	LS	\$						\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-		\$ -			\$ -
8.16	Anowance for runus osed burning construction (Arobc)		LS	\$	-		\$ -			\$ -
	Salas Tay on Materials	- 1		\$	918,763					
8.18 8.19	Sales Tax on Materials Fees for permits, including roadway, railroad, building or other local permits	1	LS LS	>	918,763		\$ 19,805		\$ 918,763 \$ 19,805	
	processor permits, including roadway, rainoad, building Of Other IOCal permits	1	LJ.	1		~	د الارد ا	د000ردء	7 13,003	v 13,003

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	1	TOTAL
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 918,763		\$ 3,841,880		\$	4,760,643

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D. SS Rotterdam-Install

ITC - T031 - (Segment A) F. Edic Substation - Install

5		Total:	\$ 2,660,300	
ITC - T031 - (Segme	nt A)			
		Supply	Installation	Total
F. Edic Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	2,025	\$ 5,625	\$ 7,650
2. SUBSTATION FOUNDATIONS	\$	100,098	\$ 107,200	\$ 207,298
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$ 88,800
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$ 280,000
5. SMALL EQUIPTMENT / MATERIALS	\$	280,000	\$ 133,500	\$ 413,500
6. CONTROL HOUSE / PANELS	\$	173,500	\$ 130,800	\$ 304,300
7. MISC ITEMS	\$	339,357	\$ 507,880	\$ 847,237
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	91,150	\$ 420,364	\$ 511,515
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,230,530	\$ 1,429,769	\$ 2,660,300
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,230,530	\$ 1,429,769	\$ 2,660,300

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
F. Edic S	ubstation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$ 27	\$ 2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	0	LF	\$ 100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4	Permanent Access Road - 20'-Wide (From Gordon RD)	0	LF	\$ 35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ 2,025		\$ 5,625		\$ 7,650
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	1	EA	\$ 14,940	\$ 14,940	\$ 16,000	\$ 16,000	\$ 30,940	\$ 30,940
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	6	EA	\$ 4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,482		\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	9	EA	\$ 4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1k	Arrester Stand Foundations	3	EA	\$ 4,482			\$ 14,400		\$ 27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$ 4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,282
2.1n	Misc. Structure Foundations		EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820		\$ 48,000	\$ -	\$ 92,820	

Estimate Revision:

						Labor O Foreignsont	Lahan Q Familiannant		
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0		\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0		\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2j 2.2k	Instrument Transformer Stand Foundations Arrester Stand Foundations	0	EA EA	\$ 3,735 \$ 3,735	\$ - \$ -	\$ 4,000 \$ 4,000	\$ - \$ -	\$ 7,735 \$ 7,735	
2.2K	Wave Trap Stand Foundations	0		\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2m	Misc. Structure Foundations		EA.	\$ -	\$ -	\$ 4,000	\$ -	\$ -	\$ -
2.2p	mise. Stractare roundations			Ť	T	7	T	Ť	*
r									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0		\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	_
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0		\$ 16,434	\$ -		\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0		\$ 16,434	\$ -	+ · · · · · · · · · · · · · · · · · · ·	\$ -	\$ 34,034	
2.3e	Switch Stand Foundations	0		\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3f	Fuse Stand Foundations	0		\$ 2,988	\$ - \$ -	\$ 3,200		\$ 6,188	
2.3g	Bus Support 3ph Foundations	0		\$ 2,988 \$ 2,988	<u> </u>	\$ 3,200 \$ 3,200	7	\$ 6,188 \$ 6,188	
2.3h 2.3j	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	0		\$ 2,988	\$ - \$ -	\$ 3,200	\$ - \$ -	\$ 6,188	
2.3k	Arrester Stand Foundations	0		\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3n	Station Service Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0		\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0		\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad (40'x125')	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations				•				•
2.6a	70' Lightning Mast Foundation	0		\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	
2.6b	60' Lightning Mast Foundation	0	EA EA	\$ -	\$ -	\$ - \$ -	\$ -	\$ -	\$ -
2.6c	50' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION FOUNDATIONS				\$ 100,098		\$ 107,200		\$ 207,298
	N STRUCTURES				Ţ 100,030		7 107,200		207,230
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1c	Switch Stands	1		\$ 14,800	\$ 14,800		\$ 14,800	\$ 29,600	\$ 29,600
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$ -
3.1e								_	
3.1f	Bus Support 1 Ph	0		\$ 3,700	\$ -	\$ 3,700		\$ 7,400	
3.1g	Instrument Transformer Stand	9		\$ 1,850	\$ 16,650		\$ 16,650	\$ 3,700	\$ 33,300
	A A Channel		EA	\$ 1,850	\$ 5,550		\$ 5,550 \$ 7,400	\$ 3,700 \$ 14,800	
3.1h	Arrester Stand	3		c 7400					3 14.800
3.1h 3.1j	Wave Trap Stand	1	EA	\$ 7,400 \$ 6,475	\$ 7,400		, ,		
3.1h			EA	\$ 7,400 \$ 6,475			, ,		
3.1h 3.1j	Wave Trap Stand	1	EA	, ,			, ,		
3.1h 3.1j 3.1k	Wave Trap Stand Misc. Structures	1	EA EA	, ,	\$ -		\$ -		\$ -
3.1h 3.1j 3.1k	Wave Trap Stand Misc. Structures 230kV	1 0	EA EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.1h 3.1j 3.1k 3.2 3.2a	Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone	0	EA EA EA	\$ 6,475	\$ - \$ - \$	\$ 6,475	\$ - \$	\$ 12,950 \$ 66,600	\$ - \$ - \$ -
3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d	Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	1 0 0 0 0 0 0	EA EA EA EA EA	\$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ - \$ -	\$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ - \$ -	\$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050	\$ - \$ - \$ - \$ - \$ -
3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d 3.2c	Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 0 0 0 0 0 0	EA EA EA EA EA EA	\$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ -	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050 \$ -	\$ - \$ - \$ - \$ - \$ - \$ -
3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c 3.2d	Wave Trap Stand Misc. Structures 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	1 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 6,475 \$ 33,300 \$ 33,300 \$ 12,025 \$ 12,025 \$ - \$ 2,775	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,950 \$ 66,600 \$ 66,600 \$ 24,050 \$ 24,050	\$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2h	Arrester Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$ -
3.2j	Wave Trap Stand	0	EA	\$ 5,550					\$ -
3.2k	Misc. Structures	0	EA	\$ 6,475				, ,	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	š -	\$ 18,500	\$ -		\$ -
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -		\$ -
3.3d	Fuse Stand	0	EA	\$ 7,955		\$ 7,955	\$ -		\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
TOTAL - SUBST	ATION STRUCTURES				\$ 44,400		\$ 44,400		\$ 88,800
4. MAJOR EQU	IPTMENT				,,,,,,		7.55		
	345kV								
4.1a	Circuit Breakers	1	EA	\$ 200,000	\$ 200,000	\$ 80,000	\$ 80,000	\$ 280,000	\$ 280,000
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV			445,000	4	† 22.222	A	4 405 000	•
4.2a	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	,	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAJO	R EQUIPTMENT				\$ 200,000		\$ 80,000		\$ 280,000
	PTMENT / MATERIALS				1 17,111		, ,,,,,,,,		
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	1	EA	\$ 40,000	\$ 40,000	\$ 15,000	\$ 15,000	\$ 55,000	\$ 55,000
5.1b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 35,000	\$ 35,000	\$ 17,500	\$ 17,500	\$ 52,500	\$ 52,500
5.1c	VT'S	3	EA	\$ 25,000	\$ 75,000	\$ 12,000	\$ 36,000	\$ 37,000	\$ 111,000
5.1d	CT'S	3	EA	\$ 13,000				\$ 21,000	·
5.1e	CCVT'S	3	EA	\$ 13,000		\$ 8,000	\$ 24,000		\$ 63,000
5.1f	Arresters	6	EA	\$ 6,500			\$ 9,000		\$ 48,000
5.1g 5.1h	Wave Traps Station Service Transformers	1 0	EA EA	\$ 13,000 \$ 200,000	\$ 13,000 \$ -	\$ 8,000 \$ 50,000	\$ 8,000 \$ -		\$ 21,000 \$ -
5.1j	Station Service Hansionners	0	LA	3 200,000	, -	3 30,000	-	3 230,000	-
	230kV				4		4		
	Line Switches - 3ph w/ motor operator	0	EA FA	· · · · · · · · · · · · · · · · · · ·		\$ 15,000	\$ -		\$ - \$ -
5.2b	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA EA	\$ 30,000 \$ 13,000		\$ 17,500 \$ 8,000	\$ - \$ -	\$ 47,500 \$ 21,000	
5.2c 5.2d	VI'S CT'S	0	EA EA	\$ 13,000		\$ 8,000	\$ -		\$ - \$ -
5.2u 5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ - \$ -		\$ - \$ -
5.2f	Arresters	0	EA	\$ 5,000		\$ 6,000	\$ -	,	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -		\$ -
5.2h	Station Service Transformers	0	EA	. ,	\$ -	\$ -	\$ -	, , , , , , ,	\$ -
5.2j									
5.3	115kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000		\$ 17,500		\$ 45,500	
5.3c	VT'S	0	EA	\$ 13,000		\$ 8,000		\$ 21,000	
	CT'S	0	EA	\$ 13,000		\$ 8,000		\$ 21,000	•
5.3e	CCVT'S	0	EA	\$ 8,000		\$ 8,000		\$ 16,000	
	Arresters	0		\$ 3,420		\$ 6,000		\$ 9,420	
5.3g 5.3h	Wave Traps Station Service Transformers	0	EA EA		\$ - \$ -		\$ - \$ -		\$ - \$ -
ااڌ.د	Station Service HallStottle15	U	EA		- ب	- ب	-	- ب	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CRANI	FOUNDTAIGNIT / MAATEDIALC				\$ 280,000		\$ 133,500		\$ 413,500
	EQUIPTMENT / MATERIALS DUSE / PANELS / GENERATOR				\$ 280,000		\$ 133,500		\$ 413,500
	CONTROL HOUSE	0	EA	\$ 551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	¢ .
	Protection and Telecom Equipment Panels	3	EA	\$ 35,000	\$ 105,000		\$ 30,000	\$ 45,000	\$ 135,000
	125VDC Batteries	0	EA	\$ 75,000	\$ -		\$ -	\$ 100,000	
	Control Cables	1	LS	\$ 68,500	\$ 68,500		\$ 100,800	\$ 169,300	
	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
	DC Distribution System	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	
	Security	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	
	Fire Alarm	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	
6.10	Generator	0	EA	\$ 100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
TOTAL CONTR	OL HOUSE / PANELS / GENERATOR				ć 173.F00		ć 120.900		ć 204.200
7. MISC ITEMS	INCETIOUSE / FAINELS / GENERATOR				\$ 173,500		\$ 130,800		\$ 304,300
	Conduit & Cable Trench System	800	L.S.	\$ 185.00	\$ 148,000	\$ 170.00	\$ 136,000	\$ 355	\$ 284,000
	Rigid Bus, Fittings & Insulators	0	L.S.	\$ 125.07	\$ -	\$ 237.10	\$ -	\$ 362	
	Strain Bus, Connectors & Insulators	2,500.0	L.S.	\$ 39.30	\$ 98,250		\$ 133,375	\$ 93	
	Grounding System	1	L.S.	\$ 10,395.00	\$ 10,395		\$ 73,305	\$ 83,700	
	Strain Bus Insulators - 345kV	24	EA	\$ 2,000	\$ 48,000		\$ 25,200	\$ 3,050	
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$ -
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$ -
	Low Voltage AC Station Service	0	LS	\$ 50,000	\$ -	\$ 75,000		\$ 125,000	
	SSVT Service	0	LS	\$ 45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	
	Control Conduits from Trench to Equipment	1	LS	\$ 14,000	\$ 14,000		\$ 70,000	\$ 84,000	
	Misc. Materials (Above and Below Ground)	1	LS	\$ 20,712	\$ 20,712	\$ 70,000	\$ 70,000	\$ 90,712	\$ 90,712
7.12 7.13									
7.13									
7.15									
7.16									
7.17									
7.18									
7.19									
7.20									
7.21									
7.22									
7.23									
7.24									
7.25 TOTAL - MISC I	TEAC				4 222.257		d 507,000		4 047.007
					\$ 339,357		\$ 507,880		\$ 847,237
	ıbstation - Install				\$ 1,139,380		\$ 1,009,405		\$ 2,148,785
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization		•					-	
	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 21,488	\$ 21,488	\$ 21,488	\$ 21,488
	Project Management, Material Handling & Amenities								
1 X/ I	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 92,642	\$ 92,642	\$ 92,642	\$ 92,642
	Utility PM and Project Oversite	1	LS		\$ -	\$ 21,488	\$ 21,488	\$ 21,488	\$ 21,488
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 21,488	\$ 21,488	\$ 21,488 \$ 21,488	\$ 21,488
	Engineering	1	ω	,	* *	21,400	y 21,400	y 21,400	· 21,700
	Design Engineering	1	LS	\$ -	\$ -	\$ 171,903	\$ 171,903	\$ 171,903	\$ 171,903
	LiDAR	-	LS	\$ -	\$ -		\$ -		\$ -
	Geotech	4	EA	\$ -		\$ 3,500			
	Surveying/Staking	1	Site	\$ -		\$ 15,041			
	Testing & Commissioning								
	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 53,720	\$ 53,720	\$ 53,720	\$ 53,720
	Permitting and Additional Costs								
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -		\$ -	\$ -	
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	l Supply Rate	Material Supply	Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 6,446	\$ 6,446	\$ 6,446	\$ 6,446
8.13	Real Estate Costs (New)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	91,150	\$ 9:	1,150	\$ -	\$ -	\$ 91,150	\$ 91,150
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 2,149	\$ 2,149	\$ 2,149	\$ 2,149
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 9:	1,150		\$ 420,364		\$ 511,515

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F. SS Edic-Install

	<u>ITC - T031 - (Segment</u>	: A)					G. Edic	Substation - Re	emoval	
Estimate Revision:	5	Total:	\$ 41,50	62						
nevision.	ITC - T031 - (Segmo	ent A)								
		Supply	Installation		Total					
	G. Edic Substation - Removal	,								
	1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	\$	- \$	-					
	2. SUBSTATION FOUNDATIONS	\$ -	\$ 14,2	200 \$	\$ 14,200					
	3. SUBSTATION STRUCTURES	\$ -	\$ 6,7	750 \$	6,750					
	4. MAJOR EQUIPTMENT	\$ -	\$	- \$	-					
	5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$ 4,5	500 \$	4,500					
	6. CONTROL HOUSE / PANELS	\$ -		- \$						
	7. MISC ITEMS	\$ -		500 \$						
	8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -		512 \$	3,011					
	CONTRACTOR MARK-UP (OH&P)	\$ -	•	- \$						
	SUBTOTAL:	\$ -		562 \$						
	CONTINGENCY ON ENTIRE PROJECT	\$ -	<u> </u>	- \$						
	TOTAL:	\$ -	\$ 41,5	562	\$ 41,562					
Description	of Work:									
Item	Item Description	Estimated Quantity	Unit of Measur	e I	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
G. Edic S	Substation - Removal									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0		\$		\$ -	\$ 203,000	\$ -		\$ -
1.2	Station stone within substation fence.	0		\$		\$ -	\$ 75	\$ -		\$ -
1.3	Substation Fence	0	LF	\$	-	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4										
1.5										
1.6										
1.7				_						
1.8										
1.9			+	_						
1.10										
1.11				-						
1.13										
1.14				_						
1.15										
	PREP/ GRADING/ FENCING / CIVIL					\$ -		\$ -		\$ -
	ON FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	1	EA	\$	-	\$ -	\$ 14,200	\$ 14,200	\$ 14,200	\$ 14,200
2.1b	Capacitor Bank Foundations	0		\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0		\$		\$ -	\$ -	\$ -		\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0		\$		\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0		\$		\$ -	\$ -	\$ -		\$ -
2.1f	Station Service Transformer Stand Foundation	0		\$		\$ -	\$ -	\$ -		\$ -
2.1g	Bus Support 3ph Foundations	0		\$		\$ - \$ -	\$ - \$ 2,400	\$ - \$ -	\$ - \$ 2,400	\$ - \$ -
2.1h	Bus Support 1 Ph Foundations	0		\$		\$ - \$ -	\$ 2,400	\$ - \$ -		•
2.1j 2.1k	Instrument Transformer Stand Foundations Arrester Stand Foundations	0		\$		\$ -	\$ -	\$ -	\$ -	\$ - \$ -
2.1K 2.1m	Wave Trap Stand Foundations	0		\$		\$ -	\$ -	\$ -	\$ -	\$ -
2.1m 2.1n	Misc. Structure Foundations		EA.	\$		\$ -	\$ -	\$ -		\$ -
2.1n 2.1p	INISC. SU UCCUTE FOURIUALIONS	1	EA.	- 13	-	-	-	-	· -	-
2.1p			+							
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	Ś	-	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations	0		\$	•	\$ -	\$ 32,000	\$ -	\$ 32,000	
2.26	Caisson DE Foundations (for DE A frame str., stand alone)	1 0		ď		é	¢ 32,000	T	\$ 32,000	

0

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EA

EA

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Page 23 of 55

22,000 \$

11,000 \$

5,200 \$

- \$ - \$

\$

\$

\$

22,000 \$

11,000 \$

5,200 \$

- \$ - \$

2.2c

2.2d

2.2e

2.2f

2.2g

Switch Stand Foundations

Bus Support 3ph Foundations

Caisson DE Foundations (for DE A frame str. - stand alone)

Station Service Transformer Stand Foundation

Caisson DE Foundations (for DE A frame str. - shared column)

2.21 Rus Support 1 Ph Foundations	2,400 2,400 - -	\$ - \$ - \$ - \$ - \$ -	\$ 2,400	1
2.2	2,400	\$ -	2	\$ -
2.2m Wave Trap Stand Foundations	-	\$ -	\$ 2,400	\$ -
2.2h Misc. Structure Foundations	-		\$ 2,400	
2.2p		\$ -	\$ -	\$ -
2.3	_		\$ -	\$ -
2-3a Circuit Breaker Foundations	_			
2.38 Circuit Breaker Foundations 0 EA S S S 2.30 Capsor To Bank Foundations 0 EA S S S 2.31 Capsor To Bank Foundations 0 EA S S S 2.32 Calsson DE Foundations (for DE A farme str stand alone) 0 EA S S S 2.34 Calsson DE Foundations (for DE A farme str stand alone) 0 EA S S S 2.36 Switch Stand Foundations 0 EA S S S 2.37 Visual Stand Foundations 0 EA S S S 2.38 Bus Support 3ph Foundations 0 EA S S S 2.39 Bus Support 3ph Foundations 0 EA S S S 2.39 Instrument Transformer Stand foundations 0 EA S S S 2.30 Instrument Transformer Stand foundations 0 EA S S S 2.30 Wave Trap Stand Foundations 0 EA S S S 2.30 Wave Trap Stand Foundations 0 EA S S S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 2.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S 3.30 Substandian S	_			
2.3b		\$ -	\$ -	\$ -
2.3c		\$ -	\$ -	\$ -
2.34 Caisson DE Foundations (for De A frame str shared column)		\$ -	\$ -	\$ -
2.28 Switch Stand Foundations 0 EA S S S S S S S S S		\$ -	\$ -	\$ -
2.3f Fuse Stand Foundations 0 EA \$ - \$ - \$ \$ \$ \$ \$ \$ \$ \$		\$ -	\$ 5,200	
2.3h Bus Support 1 Ph Foundations 0 EA S S S 2.3k Arrester Stand Foundations 0 EA S S S 2.3k Arrester Stand Foundations 0 EA S S S 2.3k Aver Tap Stand Foundations 0 EA S S S 2.3m Station Service Foundations 0 EA S S S 2.3m Station Service Foundations 0 EA S S S 2.3m Station Service Foundations 0 EA S S S 2.3p Mike, Structure Foundations 0 EA S S S 2.3p Mike, Structure Foundations 0 EA S S S 2.4d Transformer Foundation W Oil Containment 0 EA S S S 2.4d 345-2390V Transformer Foundation W Oil Containment 0 EA S S S 2.4d 230V-115M2 Transformer Foundation W Oil Containment 0 EA S S S 2.4d 230V-115M2 Transformer Foundation W Oil Containment 0 EA S S S 2.4d 230V-115M2 Transformer Foundation W Oil Containment 0 EA S S S 2.4d 230V-115M2 Transformer Foundation W Oil Containment 0 EA S S S 2.5d Control House Foundations / Oil Containment 0 EA S S S 2.5d Control House Foundations / Oil Containment 0 EA S S S 2.5d Control House Foundations / Oil Containment 0 EA S S S 2.5d Control House Foundations / Oil Containment 0 EA S S S 2.5d Control House Foundations 0 EA S S S 2.5d Control House Foundations 0 EA S S S 2.5d Control House Foundations 0 EA S S S 2.5d Control House Foundations 0 EA S S S 2.5d Control House Foundations S S S 2.5d Control House Foundations S S S 3.1d Substation Arise Transformer Stand S S S S 3.1d Substation Arise Transformer Stand S S S S 3.1d Substation Arise Transformer Stand S S S S 3.1d Substation Arise Transformer Stand S S S S 3.1d Substation Arise Transformer Stand S S S 3.1d Substation Arise Transformer Stand S S S S		\$ -	\$ -	\$ -
2.3 Instrument Transformer Stand Foundations 0 EA S S S S S S S S S		\$ -	\$ -	\$ -
2.3k	-	\$ -	\$ -	\$ -
2.3m Wave Trap Stand Foundations 0 EA S - S - S	-	\$ -	\$ -	\$ -
2.38 Station Service Foundations 0 EA 5 - 5 - 5	-	\$ -	\$ -	\$ -
2.3p Misc. Structure Foundations		\$ -	\$ -	\$ -
2.4 Transformer Foundations		\$ -	\$ -	\$ -
2.4a 345-328/W Transformer Foundation w/ Oil Containment	-	\$ -	\$ -	\$ -
2.4a 345-328/W Transformer Foundation w/ Oil Containment				
2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$.		\$ -	\$ -	\$ -
2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ \$ \$ \$ \$ \$ \$ \$		\$ -	\$ - \$ -	\$ -
2.4d 115kV-69kV Transformer Foundation w/ Oil Containment 0 EA S - S - S		\$ -	\$ 42,000	
2.5 Control House Foundations / Pad		\$ -	\$ 42,000	\$ -
2.5a Control House / Pad 0 EA S - S - S		, -	-	-
2.5a Control House / Pad 0 EA S - S - S				
2.5b Generator Foundation	-	\$ -	\$ -	\$ -
2.6a 70 Lightning Mast Foundation 0 EA \$ - \$ - \$ \$ \$ \$ \$ \$ \$ \$		\$ -	\$ -	\$ -
2.6a 70 Lightning Mast Foundation 0 EA \$ - \$ - \$ \$ \$ \$ \$ \$ \$ \$				
2.6b				
2.6c	-	\$ -	\$ -	\$ -
Sample		\$ -	\$ -	\$ -
3.1 345KV	-	\$ -	\$ -	\$ -
3.1 345KV		ć 44.200		ć 44.200
3.1 345kV		\$ 14,200		\$ 14,200
3.1a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ \$ \$ \$ \$ \$ \$ \$				
3.1b Substation A-Frame Structures - Shared Column 0 EA \$ - \$ \$ \$ \$ \$ \$ \$ \$		\$ -	\$ -	\$ -
3.1c Switch Stands 0 EA \$ - \$ - \$ \$ \$ \$ \$ \$		\$ -	\$ -	\$ -
3.1d Station Service Transformer Stand 0 EA \$ -		\$ -	\$ -	\$ -
3.1e Bus Support 3ph 0 EA \$ - \$ \$ \$ \$ \$ \$ \$ \$		\$ -	\$ -	\$ -
3.1f Bus Support 1 Ph 3 EA \$ - \$ \$ \$ \$ \$ \$ \$ \$		\$ -	\$ -	\$ -
3.1g Instrument Transformer Stand 0 EA \$ - \$ \$ \$ \$ \$ \$ \$ \$		\$ 6,750	\$ 2,250	
3.1h Arrester Stand 0 EA \$ - \$ - \$ \$		\$ -	\$ -	\$ -
3.1k Misc. Structures 0 EA \$ - \$ - \$ \$	-	\$ -	\$ -	\$ -
3.2 230kV 3.2a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ - \$ 3.2b Substation A-Frame Structures - Shared Column 0 EA \$ - \$ - \$		\$ -	\$ -	\$ -
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ - \$ 3.2b Substation A-Frame Structures - Shared Column 0 EA \$ - \$ - \$	-	\$ -	\$ -	\$ -
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ - \$ - \$ 3.2b Substation A-Frame Structures - Shared Column 0 EA \$ - \$ - \$				
3.2b Substation A-Frame Structures - Shared Column 0 EA \$ - \$ - \$	27.055	4	A 27.555	
		\$ -	\$ 27,000 \$ 27,000	
3.2c Switch Stands 0 EA \$ - \$		'	\$ 27,000	
3.2C Switch Stands		\$ -	\$ 9,750	
3.20 Station service transformer stanto 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$		\$ -	\$ -	
3.26 Bus Support 1 Ph			\$ 2,250	
3.2 Ussupport 1 m 0 EA \$ - \$ - \$ \$ \$ \$ \$ \$ \$ \$			\$ 2,230	
3.2b Arrester Stand 0 EA \$ - \$ - \$			\$ 1,050	
3.2) Wave Trap Stand 0 EA \$ - \$ - \$			\$ 4,500	
3.2k Misc. Structures 0 EA \$ - \$ - \$		\$ -		\$ -
3.3 115kV				

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION STRUCTURES				\$ -		\$ 6,750		\$ 6,750
4. MAJOR EQUI									
	345kV	_		_	4			_	
	Circuit Breakers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d	22014								
	230kV		F.*	ć	ć	¢ 7.000	ć	ć 7.000	ć
	Circuit Breakers	0	EA EA	\$ -	\$ -	\$ 7,000 \$ 42,000	\$ - \$ -	\$ 7,000 \$ 42,000	
4.20	Capacitor Banks	0	EA	\$ -	\$ -	42,000 ج	\$ -	42,000	\$ -
4.3	115kV								
		0	ΓA	ċ	\$ -	ć	ċ	ċ	ć
	Circuit Breakers Capacitor Banks	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
4.30	Capacitor Banks	U	EA	3 -	, -	ş -	ş -	-	-
TOTAL - MAJOR	PENINTMENT				\$ -		\$ -		\$ -
	PTMENT / MATERIALS				, -		, -		3 -
	345kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500		\$ 5,500	
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.1f	Arresters	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	š -
5.1j									<u> </u>
,									
5.2	230kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
	VT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.2f	Arresters	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
	115kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
	VT'S	0		\$ -	\$ -		\$ -		\$ -
	CT'S	0		\$ -			\$ -		\$ -
	CCVT'S	0		\$ -	\$ -		\$ -		\$ -
	Arresters	0		\$ -	\$ -	\$ 1,500		\$ 1,500	
	Wave Traps	0		\$ -	\$ -	\$ -	\$ -		\$ -
	Station Service Transformers	0		\$ -	\$ -		\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMALL	EQUIPTMENT / MATERIALS DUSE / PANELS / GENERATOR				\$ -		\$ 4,500		\$ 4,500

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	3 -	, -	3 -	ş -	ş -	, -
TOTAL CONTR	OF HOUSE / DANIELS / CENTERATOR				A		A		*
	OL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS								<u> </u>	
	Conduit & Cable Trench System	0	EA	\$ -	\$ -		\$ -	\$ 42,000	
	Rigid Bus, Fittings & Insulators	1	LS	\$ -	\$ -	\$ 10,500.00	\$ 10,500	\$ 10,500	
	Strain Bus, Connectors & Insulators	0	EA	\$ -	\$ -		\$ -	\$ 39	
	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.11									
7.13									
7.14									
7.15									
TOTAL - MISC I	TEMS				\$ -		\$ 10,500		\$ 10,500
G. Edic Su	ubstation - Removal				\$ -		\$ 35,950		\$ 35,950
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
		4	1.0	ć	\$ -	ć 200	ć 200	ć 200	ć 200
	Mob / Demob	1	LS	\$ -	\$ -	\$ 360	\$ 360	\$ 360	\$ 360
	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 1,550	\$ 1,550	\$ 1,550	\$ 1,550
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 360	\$ 360	\$ 360	\$ 360
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 360	\$ 360	\$ 360	\$ 360
	Engineering								
	Design Engineering	1	LS	\$ -	\$ -	\$ 2,876	\$ 2,876	\$ 2,876	\$ 2,876
	Lidar	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech		Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Surveying/Staking		Site	\$ -	\$ -		\$ -	\$ 252	
	Testing & Commissioning		Site	7	7	7 252	7	7 252	-
	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 899	\$ -	\$ 899	\$ -
		-	LS	-	-	و و و و	- ب	999 ب	- ب
	Permitting and Additional Costs		1.0	6			<u>^</u>	^	
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -		\$ 108	\$ 108	
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17			LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fees for permits, including roadway, railroad, building or other local permits		LS		\$ -		\$ -	\$ 36	
	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -	7 30	\$ 5,612	, 30	\$ 5,612
					7		5,012		7 0,012

ITC - T031 - (Segment A) H. New Scotland Substation - Install

Total: \$ 4,466,540

ITC - T031	- (Segment A)				
		Supply	Installation		Total
H. New Scotland Substation - Install					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	4,050	\$ 112,750	\$	116,800
2. SUBSTATION FOUNDATIONS	\$	283,113	\$ 303,200	\$	586,313
3. SUBSTATION STRUCTURES	\$	114,700	\$ 114,700	\$	229,400
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$	280,000
5. SMALL EQUIPTMENT / MATERIALS	\$	260,500	\$ 129,000	\$	389,500
6. CONTROL HOUSE / PANELS	\$	471,950	\$ 210,700	\$	682,650
7. MISC ITEMS	\$	596,373	\$ 733,493	\$	1,329,866
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	154,455	\$ 697,556	\$	852,011
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	2,085,140	\$ 2,381,399	\$	4,466,540
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	Ś	2.085.140	\$ 2,381,399	Ś	4.466.540

Description o	of work.							
Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	т	TOTAL
H. New S	Scotland Substation - Install										
1. SITE PREP/	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0.50	ACRES	\$	-	\$ -	\$ 203,000	\$ 101,500	\$ 203,000	\$	101,500
1.2	Station stone within substation fence.	150	CY	\$	27	\$ 4,050			\$ 102		15,300
	Substation Fence	0	LF	\$	100	\$ -	\$ 100		\$ 200		-
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$	-
1.5											
1.6											
1.7											
1.8											
1.9											
1.10											
1.11											
1.12										└	
1.13											
1.14											
1.15											
	REP/ GRADING/ FENCING / CIVIL					\$ 4,050		\$ 112,750		\$	116,800
	N FOUNDATIONS										
	345kV										
	Circuit Breaker Foundations	1	EA	\$	14,940	\$ 14,940			\$ 30,940		30,940
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000		\$ 116,025		-
	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$	20,1.5	\$ 104,580			\$ 54,145		216,580
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000		\$ 54,145		-
	Switch Stand Foundations	6	EA	\$	4,482	\$ 26,892			\$ 9,282		55,692
	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	, , , , , , , , , , , , , , , , , , , ,		\$ 9,282		-
	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	Bus Support 1 Ph Foundations	9	EA	\$	4,482	\$ 40,338			\$ 9,282		83,538
2.1j	Instrument Transformer Stand Foundations	9	EA	\$	4,482	\$ 40,338	, , , , , , , , , , , , , , , , , , , ,	· , , , , , , , , , , , , , , , , , , ,	\$ 9,282		83,538
	Arrester Stand Foundations	3	EA	\$	4,482	\$ 13,446			\$ 9,282		27,846
	Wave Trap Stand Foundations	1	EA	\$	4,482	\$ 4,482		\$ 4,800	\$ 9,282		9,282
2.1n	Misc. Structure Foundations	0	EA.	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1p										<u> </u>	
2.2	230kV										
	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800		\$ 24,752		-
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	7 .0,000		\$ 92,820		-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$	-

Estimate Revision:

Item Item Description Estimated Quantity Unit of Measure Material Supply Rate Material Supply Cos 2.2d Caisson DE Foundations (for DE A frame str shared column) 0 EA \$ 2.2,410 \$ - 2.2e Switch Stand Foundations 0 EA \$ 3,735 \$ - 2.2f Station Service Transformer Stand Foundation 0 EA \$ 3,735 \$ - 2.2g Bus Support 3ph Foundations 0 EA \$ - \$ - 2.2h Bus Support 1 Ph Foundations 0 EA \$ 3,735 \$ -	Supply Kate	Cost	Total Unit Rate	TOTAL
2.2e Switch Stand Foundations 0 EA \$ 3,735 \$ - 2.2f Station Service Transformer Stand Foundation 0 EA \$ 3,735 \$ - 2.2g Bus Support 3ph Foundations 0 EA \$ - \$ -	\$ 24,000			
2.2f Station Service Transformer Stand Foundation 0 EA \$ 3,735 \$ - 2.2g Bus Support 3ph Foundations 0 EA \$ - \$ -			\$ 46,410	
2.2g Bus Support 3ph Foundations 0 EA \$ - \$ -	\$ 4,000		\$ 7,735	
			\$ 7,735	
2.2h Bus Support 1 Ph Foundations U EA \$ 3,735 \$ -	\$ -	\$ -	\$ -	\$ -
2.21			\$ 7,735	
2.2j Instrument Transformer Stand Foundations 0 EA \$ 3,735 \$ - 2.2k Arrester Stand Foundations 0 EA \$ 3,735 \$ -	\$ 4,000 \$ 4,000		\$ 7,735 \$ 7,735	
2.2x Artiester stam roundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$ - 2.2x Wave Trap Stand Foundations 0 EA \$ 3,735 \$	\$ 4,000		\$ 7,735	
2.2n Misc. Structure Foundations 0 EA \$ - \$ -	\$ 4,000	\$ -	\$ 7,755	\$ -
2.2p	,	-	,	-
2.3 115kV				
2.3a Circuit Breaker Foundations 0 EA \$ 5,229 \$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b Capacitor Bank Foundations 0 EA \$ 33,615 \$ -			\$ 69,615	
2.3c Caisson DE Foundations (for DE A frame str stand alone) 0 EA \$ 16,434 \$ -	\$ 17,600		\$ 34,034	
2.3d Caisson DE Foundations (for DE A frame str shared column) 0 EA \$ 16,434 \$ -	\$ 17,600		\$ 34,034	
2.3e Switch Stand Foundations 0 EA \$ 2,988 \$ -	\$ 3,200		\$ 6,188	
2.3f Fuse Stand Foundations 0 EA \$ 2,988 \$ -	\$ 3,200		\$ 6,188	
2.3g Bus Support 3ph Foundations 0 EA \$ 2,988 \$ -			\$ 6,188	
2.3h Bus Support 1 Ph Foundations 0 EA \$ 2,988 \$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3j Instrument Transformer Stand Foundations 0 EA \$ 2,988 \$ -	\$ 3,200		\$ 6,188	
2.3k Arrester Stand Foundations 0 EA \$ 2,988 \$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3m Wave Trap Stand Foundations 0 EA \$ 2,988 \$ -	\$ 3,200	- \$	\$ 6,188	\$ -
2.3n Station Service Foundations 0 EA \$ - \$	\$ -	\$ -	\$ -	\$ -
2.3p Misc. Structure Foundations 0 EA \$ - \$ -	\$ -	\$ -	\$ -	\$ -
2.4 Transformer Foundations				
2.4a 345-230kV Transformer Foundation w/ Oil Containment 0 EA \$ 97,110 \$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ 74,700 \$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ -	\$ -	\$ -	\$ -	\$ -
2.4d 115kV-69kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ -	\$ -	\$ -	\$ -	\$ -
2.5 Control House Foundations / Pad				
2.5a Control House / Pad 25' x 50' 1 EA \$ 27,639 \$ 27,639	9 \$ 29,600	\$ 29,600	\$ 57,239	\$ 57,239
2.5b Generator Foundation 0 EA \$ 16,000 \$	\$ 17,000		\$ 33,000	
2.6 Lightning Mast Foundations				
2.6a 70' Lightning Mast Foundation 2 EA \$ 5,229 \$ 10,45		\$ 11,200		
2.6b 0 EA \$ - \$ -	\$ -	\$ -	\$ -	\$ -
2.6c 0 EA \$ - \$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBSTATION FOUNDATIONS \$ 283,11	3	\$ 303,200		\$ 586,313
3. SUBSTATION STRUCTURES				
3.1 345kV				
3.1a Substation A-Frame Structures - Stand alone				
3.1b Substation A-Frame Structures - Shared Column 0 EA \$ 37,000 \$ -	\$ 37,000		\$ 74,000	
3.1c Switch Stands				
3.1d Station Service Transformer Stand 0 EA \$ 14,800 \$ - 3.1e Bus Support 3ph 0 EA \$ - \$ -	\$ 14,800 \$ -	\$ -	\$ 29,600	\$ - \$ -
3.1e Bus Support 3ph 0 EA \$ - \$ - 3.1f Bus Support 1 Ph 9 EA \$ 3,700 \$ 33,30	<u>'</u>		\$ 7,400	
3.11 bus support 1711 9 EA \$ 3,700 \$ 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50 35,50				
3.1g installment family 3 EA \$ 1,850 \$ 5,555 3 1,850 \$ 5,555			\$ 3,700	\$ 11,100
	0 \$ 7,400		-,	
3.1k Lightning Masts - 70' 0 EA \$ 6,475 \$ -	\$ 6,475		\$ 12,950	
3.2 230kV				
3.2 230kV 3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ -			\$ 66,600	
3.2c Substation A-Frame Structures - Shared Column			\$ 66,600	
	\$ 12,025		\$ 24,050	
3.2e Bus Support 3ph 0 EA \$ - \$ - \$	\$ 12,023	\$ -		\$ -
	\$ 2,775		\$ 5,550	
3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ -			\$ 2,590	
, , , , , , , , , , , , , , , , , , , ,	\$ 1,295		\$ 2,590	

2.33 Marc Servicemen	Item	ltem Description	Estimated Quantity	Unit of Measure	Mater	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3 Marc Structures	3.2j	Wave Trap Stand	0	EA	\$	5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
State		·			· ·						\$ -
2.5 Substitute Animal Structures Stard allower 0 EA S 13,000 S S 13,000 S S S S S S S S S			-		<u> </u>	-,				, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
2.5 Substitute Animal Structures Stard allower 0 EA S 13,000 S S 13,000 S S S S S S S S S	3.3	115kV									
3.38 Solitation A-Frame Solution December Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solution Solut			0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.5 South-Stands											\$ -
13.15 First Stand 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports Sh 13.16 Birth Sports											\$ -
But September Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Descriptio			0						\$ -		
But September Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Descriptio	3.3e	Bus Support 3ph	0	EA	\$	3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
3.38 Instrument Franchisment 0 EA \$ 700 \$. \$ 720 \$. \$. \$. \$. \$. \$. \$. \$. \$. \$	3.3f		0	EA							\$ -
3.3 Average Stand			0								\$ -
3.8 Mile. Shortners		Arrester Stand	0	EA	\$	740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3 Mile. Structures			0		\$	3,700	\$ -				\$ -
TOTAL - SUBSTATION STRUCTURES	3.3k		0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
### 4.1 SASW ### 4.1 Corruit treaters ### 4.1 SASW ### 4.1 Corruit treaters ### 4.1 SASW ### 4.1 Corruit treaters ### 4.1 Corruit treaters ### 4.1 Corruit treaters ### 4.1 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.2 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3 Corruit treaters ### 4.3											
### A.1 Direct Breakers ### A.1 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.2 Direct Breakers ### A.3 DISBN ### A.3 DISBN ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT Breakers ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT BREAKERS ### A.3 DIRECT B	TOTAL - SUBST	ATION STRUCTURES					\$ 114,700		\$ 114,700		\$ 229,400
4.1	4. MAJOR EQU	IPTMENT									
A	4.1	345kV									
4.12 345 W. 230 W. Auto Transformer	4.1a	Circuit Breakers	1	EA	\$	200,000	\$ 200,000	\$ 80,000	\$ 80,000	\$ 280,000	\$ 280,000
## 14.0 345 W-115 V Auto Transformer 0 EA 5 5 750,000 5 750 ## 12.0 Circuit Breakers 0 EA 5 115,000 5 5 300,000 5 5 3195 ## 12.0 Circuit Breakers 0 EA 5 115,000 5 5 300,000 5 5 3195 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 50,000 5 5 5 5112 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 50,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 52,000 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 40,000 5 15,000 5 15,000 5 15,000 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 5 5 ## 12.0 Circuit Breakers 0 EA 5 50,000 5 5 5 5 5 5 5 ## 12.0 Circuit Breakers 0 E	4.1b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.2 236W	4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
A 3	4.2	230kV									
A3 115kV	4.2a	Circuit Breakers	0	EA	\$	115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
A-30 Circuit Breakers 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$	4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
A-30 Circuit Breakers 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$											
A 30 Capactor Banks	4.3	115kV									
TOTAL - MADE REQUIPMENT MATERIALS	4.3a	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
S.MALI EQUIPMENT / MATERIALS Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay	4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
S.MALI EQUIPMENT / MATERIALS Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay Salay											
S.1 345kV							\$ 200,000		\$ 80,000		\$ 280,000
S.1a Line Switches - 3ph w/motor operator											
S.1b Disconnect Switches - 3ph w/ manual operator 1											
Silc VTS S					+ -						
S.1d										. ,	\$ 52,500
Sile CCVTS 3											
S.1f Arresters S										, , , , , , , , , , , , , , , , , , , ,	
S.1g Wave Traps 1											\$ 63,000
S.1h Station Service Transformers 0 EA \$ 200,000 \$ - \$ \$ 50,000 \$ - \$ \$ 250 \$ \$ \$ \$ \$ \$ \$ \$ \$					-					,	\$ 24,000
S.1 S.2 230kV		•								. ,	\$ 21,000
S.2 230kV		Station Service Transformers	0	EA	\$	200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.2a Line Switches - 3ph w/ motor operator 0 EA \$ 30,000 \$ - \$ 15,000 \$ - \$ 45 5.2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 35,000 \$ - \$ 5.2b 5.2c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.2b 5.2c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 13,000 \$ - \$ 6,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 13,000 \$ - \$ 6,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 10,000 \$ - \$ 6,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ \$ 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2	5.1j										
5.2a Line Switches - 3ph w/ motor operator 0 EA \$ 30,000 \$ - \$ 15,000 \$ - \$ 45 5.2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 35,000 \$ - \$ 5.2b 5.2c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.2b 5.2c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 13,000 \$ - \$ 6,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 13,000 \$ - \$ 6,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 10,000 \$ - \$ 6,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ \$ 5.2b 5.2c CCVTS 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ \$ 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2											
5.2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 35,000 \$ - \$ 17,500 \$ - \$ 52,525 5.2c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ \$ 21,525 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,526 \$ 21,5			0	ΕΛ	ć	20,000	ė	ć 1E 000	ċ	\$ 45,000	\$ -
5.2c VT'S EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.2d CTS 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.2e CCVT'S 0 EA \$ 10,000 \$ - \$ 6,000 \$ - \$ 16 5.2f Arresters 0 EA \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000 \$ - \$ 5,000											
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5.2g Wave Traps 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>:</td> <td></td> <td>\$ -</td>									:		\$ -
5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 4 3 3 0 \$ - \$ 4 3 3 0 \$ - \$ 4 3 3 0 \$ - \$ 4 3 3 0 \$ - \$ 4 3 3 0 \$ - \$ 4 3 3 0 \$ - \$ 4 3 3 0 \$ - \$ 5 0 5 5 0 0 \$ <							•			. ,	\$ -
5.2j 5.2j 5.3					· ·			· · · · · · · · · · · · · · · · · · ·			\$ -
5.3 115kV EA \$ 28,000 \$ \$ - \$ 15,000 \$ \$ - \$ 43 5.3a Line Switches - 3ph w/ motor operator 0 EA \$ 33,000 \$ - \$ 17,500 \$ - \$ 50 5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 50 5.3c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 516 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 99		Station Service Transformers	U	LA	1	-	· -	· -	-	-	· -
5.3a Line Switches - 3ph w/ motor operator 0 EA \$ 28,000 \$ - \$ 15,000 \$ - \$ 43 5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 33,000 \$ - \$ 17,500 \$ - \$ 50 5.3c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 8,000 \$ - \$ 21 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9	3.2				1						
5.3a Line Switches - 3ph w/ motor operator 0 EA \$ 28,000 \$ - \$ 15,000 \$ - \$ 43 5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 33,000 \$ - \$ 17,500 \$ - \$ 50 5.3c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 21 5.3f Arresters 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 8,000 \$ - \$ 21 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9	5.3	115kV									
5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 33,000 \$ - \$ 17,500 \$ - \$ 50 5.3c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 10 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9			0	EA	\$	28.000	\$ -	\$ 15.000	\$ -	\$ 43,000	\$ -
5.3c VT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 16 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9											
5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 16 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9								· · · · · · · · · · · · · · · · · · ·			
5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 16 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9											
5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9											
	5.3g	Wave Traps	0		\$					\$ -	
											\$ -
5.3j Fuses 0 EA \$ - \$ - \$ - \$											\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
TOTAL - SMALL	EQUIPTMENT / MATERIALS					\$ 260,500		\$ 129,000		\$	389,500
	OUSE / PANELS / GENERATOR					200,300		7 123,000		J	303,300
	CONTROL HOUSE	1	EA	\$	243,750	\$ 243,750	\$ 42,500	\$ 42,500	\$ 286,250	\$	286,250
	Protection and Telecom Equipment Panels	3	EA	\$			\$ 15,000	\$ 45,000	\$ 50,000		150,000
6.3 1	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4 C	Control Cables	1	LS	\$	123,200	\$ 123,200	\$ 123,200	\$ 123,200	\$ 246,400	\$	246,400
6.5 S	SCADA and Communications	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.6 L	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.7 D	DC Distribution System	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.8 S	Security	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.9 F	Fire Alarm	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.10 G	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$	-
	OL HOUSE / PANELS / GENERATOR					\$ 471,950		\$ 210,700		\$	682,650
7. MISC ITEMS											
	Conduit & Cable Trench System	1,200.0	LF	\$	185.00		\$ 170.00	\$ 204,000			426,000
7.2 R	Rigid Bus, Fittings & Insulators	180.0	LF	\$	125.07	\$ 22,513	\$ 237.10	\$ 42,678	\$ 362	\$	65,191
7.3 S	Strain Bus, Connectors & Insulators	100.0	LF	\$	39.30	\$ 3,930	\$ 53.35	\$ 5,335	\$ 93	Ś	9,265
								1			
	Grounding System	1,000.0	LF	\$	6.93		\$ 32.58	\$ 32,580	\$ 40		39,510
	Strain Bus Insulators - 345kV	18	EA	\$	_,		\$ 1,050		\$ 3,050		54,900
	Strain Bus Insulators - 230kV	0	EA	\$	1,400		\$ 750	\$ -	\$ 2,150		-
	Strain Bus Insulators - 115kV	0	EA	\$	1,000		\$ 550	\$ -	\$ 1,550		-
	Low Voltage AC Station Service	0	LS	\$	50,000	\$ -	\$ 75,000	\$ -	\$ 125,000		-
	SSVT Service	0	LS	\$	45,000	\$ -	\$ 45,000	\$ -	\$ 90,000	\$	-
7.10										-	
	Control Conduits from Trench to Equipment	1	LS	\$	125,000		\$ 125,000	· ,	\$ 250,000		250,000
	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	+,	\$ 180,000	\$ 180,000	\$ 360,000		360,000
	Install new communication tower foundation.	1	LS			\$ -	\$ 75,000	\$ 75,000	\$ 75,000		75,000
	Relocate existing communication tower.	1	LS	<u> </u>		\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$	50,000
7.15				-						⊢—	
7.16											
7.17				-						⊢—	
7.18 7.19				-						\vdash	
7.20				-						-	
7.21										\vdash	
7.22				-						-	
7.23											
7.24											
7.25											
TOTAL - MISC IT	TEMS					\$ 596,373		\$ 733,493		Ś	1,329,866
II Now C	cotland Substation - Install									Ś	
						\$ 1,930,686		\$ 1,683,843		3	3,614,529
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
	Mob / Demob	1	LS	\$	-	\$ -	\$ 36,145	\$ 36,145	\$ 36,145	\$	36,145
P	Project Management, Material Handling & Amenities									<u> </u>	
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 155,835	\$ 155,835	\$ 155,835	\$	155,835
8.3 L	Utility PM and Project Oversite	1	LS			\$ -	\$ 36,145	\$ 36,145	\$ 36,145	\$	36,145
	Site Accommodation, Facilities, Storage	1	LS	\$		\$ -	\$ 36,145			1	36,145
	Engineering		2.5	Ť		7	- 50,145	- 50,145	50,143	Ť	30,143
	Design Engineering	1	LS	\$	-	\$ -	\$ 289,162	\$ 289,162	\$ 289,162	Ś	289,162
	Lidar	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$	-
	Geotech	4		\$			\$ 3,500				14,000
	Surveying/Staking	1	Site	\$			\$ 25,302				25,302
	Testing & Commissioning		2,60	Ť		•	. 25,502	. 25,502	. 25,502	-	
	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 90,363	\$ 90,363	\$ 90,363	Ś	90,363
I 8,9 IT											50,555
	Permitting and Additional Costs			T .							

Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 10,844	\$ 10,844	\$ 10,844	\$ 10,844
8.13	Real Estate Costs (New)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	154,455	\$ 154,455	\$ -	\$ -	\$ 154,455	\$ 154,455
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 3,615	\$ 3,615	\$ 3,615	\$ 3,615
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 154,455		\$ 697,556		\$ 852,011

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H. SS New Scot.-Install

ITC - T031 - (Segment A) J. Porter Substation - Install Total: \$ 86,137

ITC - T031 - (Segm	ent A)			
		Supply	Installation	Total
J. Porter Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ -	\$ -
3. SUBSTATION STRUCTURES	\$	-	\$ -	\$ -
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ -	\$ -
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$ -
7. MISC ITEMS	\$	15,008	\$ 56,904	\$ 71,912
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,201	\$ 13,024	\$ 14,225
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	16,209	\$ 69,928	\$ 86,137
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	16,209	\$ 69,928	\$ 86,137

Description of Work:	

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Porter	Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
	Substation Fence	0	LF	\$ -	\$ -	\$ 100	\$ -	\$ 100	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									-
1.15					4		4		
	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS								
	345kV	2		\$ 14.940	\$ -	45,000		A 20.040	
2.1a 2.1b	Circuit Breaker Foundations	0	EA EA	\$ 14,940 \$ 56,025	7	\$ 16,000 \$ 60,000		\$ 30,940	
	Capacitor Bank Foundations Caisson DE Foundations (for DE A frame str stand alone)	0	EA EA	\$ 56,025	\$ - \$ -		\$ - \$ -	\$ 116,025 \$ 54,145	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA EA	\$ 26,145	1		7	\$ 54,145	
	Switch Stand Foundations Switch Stand Foundations	0	EA EA	\$ 26,145	\$ - \$ -	\$ 28,000		\$ 54,145	
	Station Service Transformer Stand Foundation	0	EA EA	\$ 4,482	\$ -	\$ 4,800	\$ - \$ -	\$ 9,282	
	Bus Support 3ph Foundations	0		\$ 4,482	\$ -	\$ 4,800	\$ -		\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ 4,482	\$ -	<u>'</u>	7	\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,482	Ÿ	\$ 4,800		\$ 9,282	
	Arrester Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	
	Wave Trap Stand Foundations	0	EA	\$ 4,482	Ÿ	\$ 4,800	Y	\$ 9,282	
2.1m	Misc. Structure Foundations	0	EA.	\$ -	\$ -	\$ 4,800	\$ -	\$ 5,262	\$ -
2.1p	Wisc. Structure Foundations		LA.	-	-	,	, -	· -	
2.19									
2.2	230kV								
	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	s -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820		\$ 48,000		\$ 92,820	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410		\$ 24,000		\$ 46,410	
	1			,	1 '		1 '		Page 32 of 55

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
	Wave Trap Stand Foundations	0	EA EA.	\$ 3,735	\$ - \$ -	\$ 4,000 \$ -	\$ - \$ -	\$ 7,735 \$ -	
2.2n 2.2p	Misc. Structure Foundations		EA.	\$ -	\$ -	ş -	\$ -	\$ -	\$ -
2.2μ									
2.3	115kV								
	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	\$ -
	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		-		,	- -	*	7		·
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations				•		_		
	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	
2.6b 2.6c		0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.00		U	EA	\$ -	\$ -	ş -	\$ -	\$ -	, -
TOTAL - SUBST	ATION FOUNDATIONS				\$ -		\$ -		\$ -
3. SUBSTATION					Ÿ		ý.		ý.
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1c	Switch Stands	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$ -
	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -	\$ 14,800		\$ 29,600	
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -		\$ -	\$ 7,400	
	Instrument Transformer Stand	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
	Arrester Stand	0	EA	\$ 1,850 \$ 7,400	\$ -	\$ 1,850	\$ -	\$ 3,700 \$ 14.800	\$ -
	Wave Trap Stand Misc. Structures	0	EA EA	\$ 7,400 \$ 6,475	\$ - \$ -	\$ 7,400 \$ 6,475	\$ - \$ -	\$ 14,800 \$ 12,950	\$ - \$ -
3.1K	INISC. STRUCTURES	0	EA	φ 6,4/5	· -	φ 6,4/5	φ -	<i>φ</i> 12,950	→
3.2	230kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
	Substation A-Frame Structures - Shared Column	0	EA		\$ -	\$ 33,300		\$ 66,600	•
	Switch Stands	0			\$ -	\$ 12,025		\$ 24,050	
	Station Service Transformer Stand	0	EA	\$ 12,025	\$ -	\$ 12,025		\$ 24,050	
	Bus Support 3ph	0	EA	\$ -	\$ -		\$ -		\$ -
3.2f	Bus Support 1 Ph	0	EA	\$ 2,775	\$ -	\$ 2,775		\$ 5,550	
3.2g	Instrument Transformer Stand	0	EA		\$ -		\$ -	\$ 2,590	
3.2h	Arrester Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$ -

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2j	Wave Trap Stand	0	EA	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0		\$ 18,500		\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500			\$ -	\$ 37,000	
3.3c	Switch Stands	0		\$ 7,955		\$ 7,955			\$ -
3.3d	Fuse Stand	0	EA	\$ 7,955		\$ 7,955			\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,330			\$ -		\$ -
3.3f 3.3g	Bus Support 1 Ph Instrument Transformer Stand	0	EA EA	\$ 1,850 \$ 740		. ,	\$ - \$ -	\$ 3,700 \$ 1,480	\$ - \$ -
3.3h	Arrester Stand	0	EA	\$ 740		\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ - \$ -	\$ 1,480	\$ - \$ -
3.3k	Misc. Structures	0	EA	\$ 6,475			\$ -	\$ 12,950	\$ -
3.3K	IMISC. Structures	0	LA	5 0,475	· -	ÿ 0,473	· -	ÿ 12,530	-
TOTAL - SUBST	TATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ 300,000	\$ -	\$ 80,000	\$ -	\$ 380,000	\$ -
4.1b	Capacitor Banks	0		\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	\$ -
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ 250,000	\$ -	\$ 80,000	\$ -	\$ 330,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 225,000	\$ -	\$ 60,000	\$ -	\$ 285,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
	R EQUIPTMENT				\$ -		\$ -		\$ -
	IPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0		\$ 35,000	\$ -	\$ 15,000	\$ -		\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 40,000			\$ -	\$ 57,500	
5.1c	VT'S	0	EA EA	\$ - \$ 13,000	\$ -	\$ 12,000		\$ 12,000	
5.1d 5.1e	CT'S	0						å 24.000	\$ -
	COLTIC				\$ -	\$ 8,000	\$ -	\$ 21,000	
	CCVT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1f	Arresters	0	EA EA	\$ 13,000 \$ 6,500	\$ - \$ -	\$ 8,000 \$ 1,500	\$ - \$ -	\$ 21,000 \$ 8,000	\$ - \$ -
5.1f 5.1g	Arresters Wave Traps	0 0 0	EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000	\$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ - \$ -
5.1f 5.1g 5.1h	Arresters	0	EA EA EA	\$ 13,000 \$ 6,500	\$ - \$ - \$ -	\$ 8,000 \$ 1,500	\$ - \$ -	\$ 21,000 \$ 8,000	\$ - \$ -
5.1f 5.1g	Arresters Wave Traps	0 0 0	EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000	\$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ - \$ -
5.1f 5.1g 5.1h 5.1j	Arresters Wave Traps Station Service Transformers	0 0 0	EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000	\$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ - \$ -
5.1f 5.1g 5.1h 5.1j	Arresters Wave Traps Station Service Transformers 230kV	0 0 0 0	EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000	\$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000	\$ - \$ - \$ - \$ -
5.1f 5.1g 5.1h 5.1j 5.2 5.2a	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator	0 0 0	EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ \$ 30,000	\$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000	\$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ \$ 45,000	\$ - \$ - \$ - \$ -
5.1f 5.1g 5.1h 5.1j	Arresters Wave Traps Station Service Transformers 230kV	0 0 0 0 0	EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500	\$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ \$ 45,000	\$ - \$ - \$ - \$ - \$ -
5.1f 5.1g 5.1h 5.1j 5.2 5.2a 5.2b	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0 0 0 0	EA EA EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 35,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ \$ 50,000 \$ 52,500	\$ - \$ - \$ - \$ - \$ - \$ -
5.1f 5.1g 5.1h 5.1j 5.2 5.2a 5.2b 5.2c	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 30,000 \$ 35,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ \$ 45,000 \$ 52,500 \$ 21,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.1f 5.1g 5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2d	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S	0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 30,000 \$ 35,000 \$ 13,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ \$ 45,000 \$ 52,500 \$ 21,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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5.1f 5.1g 5.1h 5.1l 5.1l 5.2l 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2f 5.2j 5.2j 5.3 5.3a 5.3a 5.3a 5.3a 5.3c 5.3d 5.3c 5.3d 5.3d 5.3d 5.3d 5.3d	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 30,000 \$ 35,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 33,000 \$ 33,000 \$ 34,000 \$ 34,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,0	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 17,500 \$ 8,000 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 250,000 \$ 250,000 \$ 45,000 \$ 21,000 \$ 21,000 \$ 16,000 \$ - \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipn Supply Rate		Labor & Equipment Cost	Total Unit Rate	TOTAL
TOTAL - SMALL	EQUIPTMENT / MATERIALS					\$ -			\$ -		\$ -
	OUSE / PANELS / GENERATOR								,		
	CONTROL HOUSE	0	EA	\$	551,250	\$ -	\$ 85	,000	\$ -	\$ 636,250	\$ -
6.2	Protection and Telecom Equipment Panels	0	EA	\$	35,000	\$ -	\$ 10	0,000	\$ -	\$ 45,000	\$ -
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25	,000	\$ -	\$ 100,000	\$ -
6.4	Control Cables	0	LS	\$	35,000	\$ -	\$ 12	,500	\$ -	\$ 47,500	\$ -
6.5	SCADA and Communications	0	EA	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100	0,000	\$ -	\$ 150,000	\$ -
6.7	DC Distribution System	0	EA	\$	50,000	\$ -	\$ 100	0,000	\$ -	\$ 150,000	\$ -
6.8	Security	0	EA	\$	7,500	\$ -	\$	7,500	\$ -	\$ 15,000	\$ -
6.9	Fire Alarm	0	EA	\$	7,500	\$ -	\$	7,500	\$ -	\$ 15,000	\$ -
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80	0,000	\$ -	\$ 180,000	\$ -
TOTAL CONTE	DOLLHOUSE / DANIELS / SENEDATOR					A			<u> </u>		•
7. MISC ITEMS	ROL HOUSE / PANELS / GENERATOR					\$ -			\$ -		\$ -
	Conduit & Cable Trench System	0	LF	\$	185.00	\$ -	\$ 17	70.00	\$ -	\$ 355	\$ -
	Rigid Bus, Fittings & Insulators	1	LS	\$	15,008.40			04.00	\$ 56,904	\$ 71,912	
7.3	Strain Bus, Connectors & Insulators	0	LF	\$	13.38	\$ -	\$ 3	39.35	\$ -	\$ 53	\$ -
7.4	Grounding System	0	LF	\$	6.93	\$ -	\$ 3	32.58	\$ -	\$ 40	\$ -
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$:	1,050	\$ -	\$ 3,050	\$ -
	Strain Bus Insulators - 345kV Strain Bus Insulators - 230kV	0	EA	\$	1,400	Ÿ		750	7	\$ 3,030	\$ -
	Strain Bus Insulators - 250kV Strain Bus Insulators - 115kV	0	EA	\$	1,400		\$	550		\$ 2,150	
	Low Voltage AC Station Service	0	LS	\$				5,000	\$ -	\$ 125,000	\$ -
	SSVT Service	0	LS	\$	45,000			5,000	т	\$ 90,000	
	Control Cables	0	LS	\$		\$ -		2,500	\$ -	\$ 945,000	\$ -
	Control Cables Control Conduits from Trench to Equipment	0	LS	\$	125,000	\$ -		5,000	\$ -	\$ 250,000	\$ -
	Misc. Materials (Above and Below Ground)	0	LS	Ś	180,000	\$ -		0,000	\$ -	\$ 360,000	\$ -
7.13	Misc. Materials (Above and Below Ground)	U	L3	3	100,000	· -	Ş 100	,000	· -	3 300,000	· -
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20											
TOTAL - MISC I	ITEMS					\$ 15,008			\$ 56,904		\$ 71,912
I. Porter	Substation - Install					\$ 15,008			\$ 56,904		\$ 71,912
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										· /
	Contractor Mobilization / Demobilization										
	Mob / Demob	1	LS	\$	-	\$ -	\$	719	\$ 719	\$ 719	\$ 719
	Project Management, Material Handling & Amenities			T		*	Ť		*	7	*
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ -	\$ 3	3,100	\$ 3,100	\$ 3,100	\$ 3,100
l l	and Cost Manager, SHEQ Staff, and Admin Staff)	1				-	, .			,	
	Utility PM and Project Oversite	1		<u> </u>		\$ -	\$	719			
	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$	719	\$ 719	\$ 719	\$ 719
	Engineering Design Facilities		10	\$		\$ -	Ś :	753	6 5750	ć 5.750	\$ 5.753
	Design Engineering LiDAR	1	LS Mile	\$	-	\$ - \$ -	\$ 5	,753	\$ 5,753 \$ -	\$ 5,753 \$ -	\$ 5,753 \$ -
				· .		,	-			,	
	Geotech Surveying/Staking	-	Site Site	\$			\$	503		\$ - \$ 503	
	Testing & Commissioning		Site	 	-	-	~	505	-	, J03	-
	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	Ś .	L,798	\$ 1,798	\$ 1,798	\$ 1,798
	Permitting and Additional Costs			Ť		7	·	,,,,,,,,	2,730	- 2,730	÷ 1,750
	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
	Environmental Mitigation		LS	\$			\$		\$ -		\$ -
1 8.11 l											
		1	LS	\$	-	\$ -	\$	216	\$ 216	\$ 216	\$ 216
8.12	Warranties / LOC's Real Estate Costs (New)	1	LS LS	\$			\$	216		\$ 216 \$ -	\$ 216 \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material:	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	La	abor & Equipment Cost	Total Unit Rate	TOTAL
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	1,201	\$ 1,201	\$ -	\$	-	\$ 1,201	\$ 1,201
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS			\$ -	\$ 72	\$	-	\$ 72	\$ -
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,201		\$	13,024		\$ 14,225

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J. SS Porter-Install

	ITC - T031 - (Segment	<u>A)</u>				K. Porte	er Substation - F	Removal	
Estimate	5	Total:	\$ 548,359						
Revision:	ITC - T031 - (Segme		Ţ 540,555		1				
	11C - 1051 - (Segine		Installation	Total	+				
	K. Porter Substation - Removal	Supply	Installation	Total	-				
	1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	\$ -	\$ -	-				
	2. SUBSTATION FOUNDATIONS	\$ -	\$ 126,600		†				
	3. SUBSTATION STRUCTURES	\$ -	\$ 206,100	\$ 206,100	1				
	4. MAJOR EQUIPTMENT	\$ -	\$ 43,500]				
	5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$ 59,500		1				
	6. CONTROL HOUSE / PANELS	\$ -	\$ -	\$ -	1				
	7. MISC ITEMS	\$ -	\$ 38,613 \$ 74,047		+				
	8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: CONTRACTOR MARK-UP (OH&P)	\$ -	\$ 74,047	\$ 74,047	1				
	SUBTOTAL:	\$ -	\$ 548,359						
	CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ 540,333	\$ 540,555	1				
	TOTAL:	\$ -	\$ 548,359		i				
Description			340,333	3-10,333					
_ cos. iption									
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
K. Porte	r Substation - Removal								
	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0		\$ -	\$ -	\$ 75	'	\$ 75	
1.3	Substation Fence	0		\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8 1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS 345kV								
2.1 2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0		\$ - \$ -	\$ - \$ -	\$ -	\$ -	\$ -	\$ -
2.1j 2.1k	Instrument Transformer Stand Foundations Arrester Stand Foundations	0		\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ -	\$ - \$ -
2.1K 2.1m	Wave Trap Stand Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations		EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV						4 24		4 4
2.2a	Circuit Breaker Foundations	3		\$ -	\$ -	\$ 7,200			
2.2b	Capacitor Bank Foundations Caisson DE Foundations (for DE A frame str stand alone)	0		\$ -	\$ -	\$ 32,000 \$ 22,000		\$ 32,000 \$ 22,000	
2.2c 2.2d	Caisson DE Foundations (for DE A frame str stand alone) Caisson DE Foundations (for DE A frame str shared column)	5		\$ - \$ -	\$ -	\$ 22,000			
2.2u 2.2e	Switch Stand Foundations Switch Stand Foundations	5		\$ -	\$ -	\$ 11,000			
2.2f	Station Service Transformer Stand Foundation	0		\$ -	\$ -	\$ -	\$ -	\$ 5,200	\$ -
2.2g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -			\$ -
				1.	1.				

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations	4	EA	\$ -	\$ -	\$ 2,400	\$ 9,600	\$ 2,400	\$ 9,600
2.2k	Arrester Stand Foundations	6	EA	\$ -	\$ -	\$ 2,400	\$ 14,400	\$ 2,400	\$ 14,400
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations		EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -		\$ -	\$ 5,200	
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad			_	_	1		1	_
2.5a	Control House / Pad	0		\$ -	\$ -	\$ -	\$ -		\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightwing Most Foundations								
2.6a	Lightning Mast Foundations 70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b	70 Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.00			LA.	7	7	,	7	,	*
TOTAL - SUBST	TATION FOUNDATIONS				\$ -		\$ 126,600		\$ 126,600
3. SUBSTATIO	N STRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	•	\$ -
3.1g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
J J.Zd		5	EA EA	\$ -	\$ -	\$ 27,000		\$ 27,000	
3.2h	Substation Δ-Frame Structures - Shared Column	1 3		\$ -	\$ -				· · · · · · · · · · · · · · · · · · ·
3.2b	Substation A-Frame Structures - Shared Column Switch Stands	6		Y					
3.2c	Switch Stands	6		Ś -	IS -	IS -	IS - I		
3.2c 3.2d	Switch Stands Station Service Transformer Stand	0	EA	\$ - \$ -			\$ - \$ -		
3.2c 3.2d 3.2e	Switch Stands Station Service Transformer Stand Bus Support 3ph	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2c 3.2d 3.2e 3.2f	Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0	EA EA EA	\$ - \$ -	\$ -	\$ - \$ 2,250	\$ - \$ -	\$ - \$ 2,250	\$ - \$ -
3.2c 3.2d 3.2e 3.2f 3.2g	Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 6	EA EA EA	\$ - \$ - \$	\$ - \$ - \$	\$ - \$ 2,250 \$ 1,050	\$ - \$ - \$ 6,300	\$ - \$ 2,250 \$ 1,050	\$ - \$ - \$ 6,300
3.2c 3.2d 3.2e 3.2f	Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0	EA EA EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ 2,250 \$ 1,050	\$ - \$ - \$ 6,300 \$ 6,300	\$ - \$ 2,250	\$ - \$ - \$ 6,300 \$ 6,300
3.2c 3.2d 3.2e 3.2f 3.2g 3.2h	Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0 6 6	EA EA EA EA EA	\$ - \$ - \$ - \$	\$ - \$ - \$ - \$ -	\$ - \$ 2,250 \$ 1,050 \$ 1,050 \$ 4,500	\$ - \$ - \$ 6,300 \$ 6,300	\$ - \$ 2,250 \$ 1,050 \$ 1,050 \$ 4,500	\$ - \$ - \$ 6,300 \$ 6,300
3.2c 3.2d 3.2e 3.2f 3.2g 3.2h 3.2j	Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand	0 0 0 6 6	EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ - \$ 2,250 \$ 1,050 \$ 1,050 \$ 4,500	\$ - \$ - \$ 6,300 \$ 6,300 \$ -	\$ - \$ 2,250 \$ 1,050 \$ 1,050 \$ 4,500	\$ - \$ - \$ 6,300 \$ 6,300 \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION STRUCTURES				\$ -		\$ 206,100		\$ 206,100
4. MAJOR EQU									
	345kV								
	Circuit Breakers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
	230kV								
4.2a	Circuit Breakers	3	EA	\$ -	\$ -	\$ 14,500	\$ 43,500	\$ 14,500	\$ 43,500
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
	115kV								
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	R EQUIPTMENT				\$ -		\$ 43,500		\$ 43,500
	PTMENT / MATERIALS								
	345kV								
	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -		\$ -	\$ 5,500	
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	
	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j									
	22014								
	230kV	2	EA.	\$ -	\$ -	ć 5.500	ć 44.000	ć 5.500	ć 44.000
	Line Switches - 3ph w/ motor operator	2 3	EA EA	\$ -		\$ 5,500 \$ 5,500	\$ 11,000 \$ 16,500	\$ 5,500 \$ 5,500	\$ 11,000 \$ 16,500
	Disconnect Switches - 3ph w/ manual operator								
	VT'S	2	EA	'	т		,	, , , , , , , , , , , , , , , , , , , ,	\$ 3,000
5.2d 5.2e	CT'S CCVT'S	0	EA EA	\$ -	\$ - \$ -	\$ - \$ 1,500	\$ - \$ 9,000	\$ - \$ 1,500	\$ - \$ 9,000
	Arresters	6	EA EA	\$ -	\$ -	\$ 1,500	\$ 9,000	\$ 1,500	
		2		\$ -	\$ -				
	Wave Traps Station Service Transformers	0	EA EA	\$ -	\$ - \$ -	\$ 2,500 \$ -	\$ 5,000	, ,	
	Station Service HallStufflets		ĽA	-	-	-	- ب	\$ -	\$ -
5.2j									
E 2	115kV								
		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3a 5.3b	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0	EA EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
	VT'S	0	EA EA	\$ -	\$ -	\$ 5,500	\$ -		\$ -
	CT'S	0			\$ -		\$ -		\$ -
	CCVT'S	0		\$ -	\$ -		\$ -		\$ -
	Arresters	0		\$ -	\$ -			\$ 1,500	
		0		\$ -					\$ -
	Wave Traps Station Service Transformers	0		\$ -			\$ -		\$ -
		0					t .		\$ -
3.3]	Fuses		ĽA	\$ -	-	\$ -	\$ -	\$ -	-
TOTAL - SMALL	L EQUIPTMENT / MATERIALS				\$ -		\$ 59,500		\$ 59,500
	OUSE / PANELS / GENERATOR				-		7 35,300		2 35,300
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
L	CONTROL TO SUE	. 0	L	1 *	1 4	130,000		7 130,000	D 20 - £ 5 5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - CONTI	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS					·				
	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
	Rigid Bus, Fittings & Insulators	1	L.S.	\$ -	\$ -		\$ 18,938	\$ 18,938	
	Strain Bus, Connectors & Insulators	1	L.S.	\$ -	\$ -		\$ 19,675	\$ 19,675	
	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	
7.5	Grounding System		LA	7	7	7 42,000.00	7	7 42,000	Ť
7.6									
7.7									
7.7									
7.8									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 38,613		\$ 38,613
K. Porter	Substation - Removal				\$ -		\$ 474,313		\$ 474,313
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
	Mob / Demob	1	LS	\$ -	\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Project Management, Material Handling & Amenities	1	LJ	, -	· -	3 4,743	\$ 4,745	\$ 4,745	3 4,743
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS		\$ -	\$ 20,449	\$ 20,449	\$ 20,449	\$ 20,449
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 4,743	\$ 4,743	\$ 4,743	\$ 4,743
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 4,743		\$ 4,743	
	Engineering								
	Design Engineering	1	LS	\$ -	\$ -	\$ 37,945	\$ 37,945	\$ 37,945	\$ 37,945
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -		\$ -
	Surveying/Staking	-	Site	\$ -	\$ -	\$ 3,320	\$ -	\$ 3,320	\$ -
	Testing & Commissioning			7	T	7 0,020	Ť	7 0,021	T
	Testing & Commissioning of T-Line and Equipment	_	LS	\$ -	\$ -	\$ 11,858	\$ -	\$ 11,858	\$ -
	Permitting and Additional Costs		2.5	7	7	7 11,050	7	7 11,050	Ť
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Licensing & Permitting Costs Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ - \$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 1,423	\$ 1,423	\$ 1,423	\$ 1,423
		-	LS	\$ -	\$ - \$ -	\$ 1,423			\$ 1,423
	Real Estate Costs (New)								
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	т	\$ -		\$ -	
	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -		\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 474	\$ -	\$ 474	\$ -
	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 74,047		\$ 74,047

ITC - T031 - (Segment A)

L. Interconnection Edic Station

Estimate Revision: 5 Total: \$ 2,113,230

ITC - T031 - (Se	egment A)				
		Supply	Installation		Total
L. Interconnection Edic Station					
1. CLEARING & ACCESS	\$	-	\$ 367,850	\$	367,850
2. FOUNDATIONS	\$	168,366	\$ 170,169	\$	338,536
3. STRUCTURES	\$	501,469	\$ 321,821	\$	823,289
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$	-
5. INSULATORS, FITTINGS, HARDWARE	\$	160,000	\$ 94,400	\$	254,400
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	66,387	\$ 262,769	\$	329,155
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	896,222	\$ 1,217,009	\$	2,113,230
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL	Ś	896.222	\$ 1,217,009	Ś	2.113.230

	of Wor	

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply R	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
L. Interd	onnection Edic Station										
1. CLEARING 8	& ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$	10,000
1.3	Access Road	-	LF		-	\$ -	\$ 45		\$ 45	\$	-
1.4	Silt Fence	3,500.0	LF	7	-	\$ -	\$ 4			\$	14,000
1.5	Matting - Access and ROW	3,500.0	LF	'		\$ -	\$ 70				245,000
1.6	Matting - To Work Area	300.0	LF			\$ -	\$ 70				21,000
1.7	Snow Removal	-	LS	'		\$ -	\$ 516,800		\$ 516,800		-
1.8	ROW Restoration	0.5	Mile			\$ -	\$ 10,000				5,000
1.9	Work Pads	20,000.0	SF	'		\$ -	\$ 4				70,400
1.10	Restoration for Work Pad areas	4,000.0	SF		_	\$ -	\$ 0.2	\$ 600			600
1.11	Temporary Access Bridge	-	EA	·		\$ -	\$ 20,035	\$ -	\$ 20,035		-
1.12	Air Bridge	-	EA			\$ -	\$ 14,445	\$ -	\$ 14,445		-
1.13	Stabilized Construction Entrance	-	EA	7		\$ -	\$ 4,580		\$ 4,580		-
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA			\$ -	\$ 4,130	\$ -	\$ 4,130		-
1.15	Gates	-	EA		-	\$ -	\$ 2,500		\$ 4,500		-
1.16	Culverts / Misc. Access	-	EA		750		\$ 1,250	\$ -	\$ 2,000		-
1.17	Concrete Washout Station	1	EA	\$		\$ -	\$ 1,850	· ,	\$ 1,850	_	1,850
1.18						\$ -		\$ -		\$	-
1.19			01	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$	-
1.20	Crushed Rock	0	СҮ	\$	2/	\$ -	\$ /5	\$ -	\$ 102	>	-
TOTAL - CLEA	RING & ACCESS					\$ -		\$ 367,850		\$	367,850
2. FOUNDATION	DNS										
2.1	Foundation – Drilled Pier – 8'X 27'	3	EA	\$ 41,	332	\$ 123,995	\$ 41,774	\$ 125,322	\$ 83,106	\$	249,317
2.2	Foundation – Drilled Pier – 8'X 29'	1	EA		372		\$ 44,847	\$ 44,847	\$ 89,219	\$	89,219
2.3	Rock Excavation Adder	-	СУ	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$	-
2.4											
2.5											
2.6											
2.7											
2.8										Ь.	
2.9										—	
2.10										Ь	
2.11										Ь—	
2.12										Ь	
										Pag	e 41 of 55

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Item	Item Description	Estimated Quantity	Unit of Measure	Material	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	т	TOTAL
2.13											
2.14											
2.15	DATIONS					¢ 160.366		ć 170.160		ć	220 526
TOTAL - FOUN 3. STRUCTURE						\$ 168,366		\$ 170,169		\$	338,536
3.1	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) – 105′	3	Structure	\$	98,883	\$ 296,648	\$ 59,330	\$ 177,989	\$ 158,212	5	474,636
3.2	2-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	1		\$	202,797				\$ 324,475		324,475
3.3	Install Grounding and Grounding Accessories	4	Pole	\$	506	\$ 2,024	\$ 5,539	\$ 22,154	\$ 6,045	\$	24,178
3.4											
3.5											
3.6											
3.7											
3.9										\vdash	
3.10											
3.11											
3.12											
3.13											
3.14				1							
3.15											
TOTAL - STRUC						\$ 501,469		\$ 321,821		\$	823,289
	R, SHIELDWIRE, OPGW					_		_		_	
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571	-	LF LF	\$		\$ - \$ -	\$ 5.00 \$ 5.00		\$ 8.53 \$ 6.55		-
4.2	(1) OPGW 36 FIDER AC-33/38/371 (1) 3/8" EHS7 Steel	-	LF LF	\$	0.72		\$ 5.00		\$ 5.72		
4.5	Remove Existing Cable From Existing Structures	-	Mile	\$		\$ -	\$ 30,000		\$ 30,000.00		-
4.6	Remove Existing OPGW Cable	-	Mile	\$		\$ -	\$ 12,000		\$ 12,000.00		-
4.7	Remove Existing EH7	-	Mile	\$	-	\$ -	\$ 12,000		\$ 12,000.00		-
4.8											
4.9		-								<u> </u>	
4.10	Rider Poles - Relocated	-	Set	\$	4.750	\$ -	\$ 3,500		\$ 3,500.00		-
4.11	Rider Poles UCTOR, SHIELDWIRE, OPGW:	-	EA	\$	1,750	\$ -	\$ 3,500	\$ - \$ -	\$ 5,250.00	\$	-
	FITTINGS, HARDWARE					<u>, </u>		, -		Ť	
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)		Assembly	\$	1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$	-
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)		Assembly	\$	900	\$ -	\$ 560		\$ 1,460		-
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$	1,800	\$ 108,000	\$ 720		\$ 2,520		151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)		Assembly	\$	900		\$ 560		\$ 1,460		-
5.5	OPGW Assembly - Tangent	-	Assembly	\$		\$ -	\$ 150		\$ 350		-
5.6	OPGW Assembly - Angle / DE	8	Assembly	\$	250		\$ 150		\$ 400 \$ 400		3,200
5.7 5.8	OHSW Assembly - Angle / DE OPGW Splice Boxes	-	Assembly Set	\$	250 1,750		\$ 150 \$ 1,746		\$ 400 \$ 3,496		
5.9	OPGW Splice & Test		EA	\$	1,400		\$ 2,520		\$ 3,920		-
5.10	Spacer - Conductor	-	EA	\$	50		\$ 35		\$ 85		-
5.11	Vibration Dampers - Conductor	-	EA	\$		\$ -	\$ 35		\$ 70		-
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$	-
5.13	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.14	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$	-
5.15											
5.16											
5.17				1							
5.18	Laborator American		F.A.	-	F0.000	¢ 50,000	¢ 50,000	ć 50.000	ć 100.000	_	400 000
5.19 5.20	Interconnection Arrangements	1	EA	\$	50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 100,000	\$	100,000
	L ATOR, FITTINGS, HARDWARE					\$ 160,000		\$ 94,400		\$	254,400
	onnection Edic Station					\$ 829,835		\$ 954,240		\$	1,784,075
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
C 1	Mob / Demob	1	LS	Ś	-	\$ -	\$ 17,841	\$ 17,841	\$ 17,841	Ś	17,841
6.1	Project Management, Material Handling & Amenities			7				/- /-	+,	<u> </u>	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Suppl	y Rate	Materia	l Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS					\$ 76,918	\$ 76,918	\$ 76,918	\$ 76,918
6.3	Utility PM and Project Oversite	1	LS			\$	-	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$	-	\$ 17,841	\$ 17,841	\$ 17,841	\$ 17,841
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$	-	\$ 89,204	\$ 89,204	\$ 89,204	\$ 89,204
6.6	LiDAR	-	LS	\$	-	\$	-	\$ 5,352	\$ -	\$ 5,352	\$ -
6.7	Geotech	1	Location	\$	-	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$	-	\$ 12,489	\$ 12,489	\$ 12,489	\$ 12,489
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$	-	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 5,352	\$ 5,352	\$ 5,352	\$ 5,352
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 6	6,387	\$	66,387	\$ -	\$ -	\$ 66,387	\$ 66,387
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 1,784		\$ 1,784	\$ 1,784
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	66,387		\$ 262,769		\$ 329,155

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ITC - T031 - (Segment A) M. Interconnection New Scotland Station

Estimate	5		Total:	\$ 3,185,368		
Revision:	ITC T024 (6			 		
	ITC - T031 - (S	segment A)			_	
			Supply	Installation		Total
	M. Interconnection New Scotland Station					
	1. CLEARING & ACCESS	\$	-	\$ 367,850	\$	367,850
	2. FOUNDATIONS	\$	365,657	\$ 473,093	\$	838,749
	3. STRUCTURES	\$	655,465	\$ 445,628	\$	1,101,092
	4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,555	\$ 26,100	\$	29,65
	5. INSULATORS, FITTINGS, HARDWARE	\$	205,530	\$ 133,595	\$	339,12
	6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	98,416	\$ 410,480	\$	508,89
	CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
	SUBTOTAL:	\$	1,328,622	\$ 1,856,746	\$	3,185,36
	CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
	TOTAL:	\$	1,328,622	\$ 1,856,746	\$	3,185,36
escriptio	n of Work:					
					$\overline{}$	

M. Interconnection New Scotland Station	Item	ltem Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1.1 Clearing the RDW - Heavy (mowing & clearing)	M. Inter	connection New Scotland Station									
12 Clearing the ROW Light (monoxing)	1. CLEARING 8	ACCESS									
1.3 Access Food	1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.5 Matring-Access and BOW 3,2000 UF 5 5 5 5 5 5 5 5 5	1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.5	1.3	Access Road	-	LF	\$	-	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.6 Matting-To Work Area 300	1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.7 Show Memoral . LS S S S S S S S S	1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.8 ROW Retroation 0.5 Mile 5	1.6	Matting - To Work Area	300.0	LF	\$	-	\$ -	\$ 70	\$ 21,000	\$ 70	\$ 21,000
19 Work Pads 20,000.0 SF S	1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.10 Restoration for Work Pad areas	1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.11 Temporary Access Bridge	1.9	Work Pads	20,000.0	SF	\$	-	\$ -	\$ 4	\$ 70,400	\$ 4	\$ 70,400
1.12	1.10	Restoration for Work Pad areas	4,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 600	\$ 0	\$ 600
1.13 Stabilized Construction Entrance	1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.14 Maintenance and Protection of Traffic on Public Roads . EA \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$.	1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.15 Gates	1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.16 Culverts / Misc. Access - EA S 750 S - S 1,150 S - S 2,000 S - 1,17 Concrete Washout Station 1 EA S - S - S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S 1,850 S	1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.17 Concrete Washout Station 1 EA 5 - 5 - 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 5 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1,850 1	1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.18	1.16	Culverts / Misc. Access	-	EA	\$	750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.19	1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.20 Crushed Rock 0 CY S 27 S S S S S S S S S	1.18						\$ -		\$ -		\$ -
State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State Stat	1.19						\$ -		\$ -		\$ -
2.1 Foundation - Drilled Pier - 8"X 50" 3 EA \$ 76,500 \$ 229,501 \$ 77,320 \$ 231,959 \$ 153,820 \$ 461,459	1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$ -
2.1 Foundation – Drilled Pier – 8'X 50' 2.2 Foundation – Drilled Pier – 8'X 89' 1 EA \$ 76,500 \$ 229,501 \$ 77,320 \$ 231,959 \$ 153,820 \$ 461,459 2.3 Rock Excavation Adder 51.8 CY \$ - \$ - \$ 2,000 \$ 103,520 \$ 203,770 \$ 273,770 2.4 C	TOTAL - CLEAF	RING & ACCESS					\$ -		\$ 367,850		\$ 367,850
2.2 Foundation – Drilled Pier – 8'X 89' 1 EA \$ 136,156 \$ 136,156 \$ 137,614 \$ 137,614 \$ 273,770 \$ 273,770 2.3 Rock Excavation Adder 51.8 CY \$ - \$ - \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 2.4	2. FOUNDATIO	DNS									
2.3 Rock Excavation Adder 51.8 CY \$ - \$ - \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 103,520 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,00	2.1	Foundation – Drilled Pier – 8'X 50'	3	EA	\$	76,500	\$ 229,501	\$ 77,320	\$ 231,959	\$ 153,820	\$ 461,459
2.4 2.5 2.6 2.7 2.8 2.9 2.10	2.2	Foundation – Drilled Pier – 8'X 89'	1	EA	\$	136,156	\$ 136,156	\$ 137,614	\$ 137,614	\$ 273,770	\$ 273,770
2.5 2.6 2.7 2.8 2.9 2.10	2.3	Rock Excavation Adder	51.8	СҮ	\$	-	\$ -	\$ 2,000	\$ 103,520	\$ 2,000	\$ 103,520
2.6 2.7 2.8 2.9 2.10	2.4										
2.7 2.8 2.9 2.10	2.5										
2.8 2.9 2.10											
2.9 2.10											
2.10											

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Estimate

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Su	upply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.12										
2.13										
2.14										
2.15										
TOTAL - FOUN						\$ 365,657		\$ 473,093		\$ 838,749
3. STRUCTURI	1-CKT 345KV 3-POLE MEDIUM ANGLE DEADEND (15°-60°) - 115'	2	Christian	\$	178,026	\$ 534,077	\$ 106,815	\$ 320,446	\$ 284,841	\$ 854,522
3.2	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°) - 115'	3	Structure Structure	\$	116,328			\$ 69,797		\$ 854,322
3.3	Install Grounding and Grounding Accessories	10		\$	506					\$ 60,445
3.4	Install Grounding and Grounding Accessories	10	role	+		\$ -	رورورو	\$ 33,383	5 0,045	3 00,443
3.5						Ÿ		<u> </u>		
3.6						\$ -		\$ -		
3.7						\$ -		\$ -		
3.8						\$ -		\$ -		
3.9						\$ -		\$ -		
3.10						\$ -	<u> </u>	\$ -		
3.11						\$ -		\$ -		
3.12				1		\$ -		\$ -		
3.13				1		\$ -		\$ -		
3.14						\$ -		\$ -		
3.15						\$ -		\$ -		
TOTAL - STRU	CTILIDEC					\$ 655,465		\$ 445,628		\$ 1,101,092
	IR, SHIELDWIRE, OPGW					\$ 055,405		\$ 445,028		\$ 1,101,092
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	1,500	LF	\$	1.90	\$ 2,850	\$ 5.00	\$ 7,500	\$ 6.90	\$ 10,350
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35		\$ 5.00	\$ -	\$ 6.35	\$ -
4.3	(1) 3/8" EHS7 Steel	1,500	LF	\$	0.47			\$ 7,500		\$ 8,205
4.5	Remove Existing 345kV Cable From Existing Structures	0.3	Mile	\$		\$ -	\$ 30,000	\$ 7,500		\$ 7,500
4.6	Remove Existing OPGW Cable	-	Mile	Ś		\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$ -
4.7	Remove Existing EH7	0.3	Mile	\$		\$ -	\$ 12,000	\$ 3,600		\$ 3,600
4.8										
4.9										
4.10	Rider Poles - Relocated	-	Set	\$		\$ -	\$ 3,500			\$ -
4.11	Rider Poles	-	EA	\$	1,750		\$ 3,500		\$ 5,250.00	\$ -
	UCTOR, SHIELDWIRE, OPGW:					\$ 3,555		\$ 26,100		\$ 29,655
	, FITTINGS, HARDWARE		A	Ć.	1 000	ć	ć 720	Ć.	ć 2.520	\$ -
5.1 5.2	345kV Tangent (1-Group of 18-Bells Each Assembly) 115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$		\$ - \$ -	\$ 720 \$ 560	\$ - \$ -	\$ 2,520 \$ 1,460	\$ -
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly Assembly	\$		\$ 152,400	\$ 1,350	\$ 81,000	, , , , ,	\$ 233,400
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	1,270		\$ 725		\$ 1,995	\$ 233,400
5.5	OPGW Assembly - Tangent	_	Assembly	\$	200		\$ 150		\$ 350	\$ -
5.6	OPGW Assembly - Angle / DE	-	Assembly	\$	250		\$ 150	\$ -	\$ 400	\$ -
5.7	OHSW Assembly - Angle / DE	4	Assembly	\$	250			\$ 600		\$ 1,600
5.8	OPGW Splice Boxes	-	Set	\$	1,750		\$ 1,746		\$ 3,496	\$ -
5.9	OPGW Splice & Test	-	EA	\$	1,400	\$ -	\$ 2,520	\$ -	\$ 3,920	\$ -
5.10	Spacer - Conductor	9	EA	\$	50		\$ 35	\$ 315		\$ 765
5.11	Vibration Dampers - Conductor	48	EA	\$	35	\$ 1,680	\$ 35	\$ 1,680	\$ 70	\$ 3,360
5.12	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$ -
5.13	Guys, Anchors, and Accessories	_	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$ -
	Misc. materials (Signs and Markers)	-	Mile	<u> </u>	720			\$ -		
5.14 5.15	iviisc. materiais (signs and ividikers)	-	iville	\$	//0	\$ - \$ -	\$ 1,006	\$ -	\$ 1,776	\$ - \$ -
5.16	Interconnection Arrangements	1	EA	\$	50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 100,000	\$ 100,000
5.17		1		1		\$ -	- 55,000	\$ -	, 100,000	\$ -
5.18						\$ -		\$ -		\$ -
5.19						\$ -		\$ -		\$ -
5.20						\$ -		\$ -		\$ -
TOTAL - INSU	ATOR, FITTINGS, HARDWARE					\$ 205,530		\$ 133,595		\$ 339,125
M. Inter	connection New Scotland Station					\$ 1,230,206		\$ 1,446,265		\$ 2,676,471
	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									=,=,=,=,=
J. IVIOB/DEIVI	Contractor Mobilization / Demobilization									
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 26,765	\$ 26,765	\$ 26,765	\$ 26,765
0.1	Project Management, Material Handling & Amenities	†	- 23	1		7	- 20,703	- 20,703	- 20,703	- 20,733
	1 - James y market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market and a market	1								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 115,392	\$ 115,392	\$ 115,392	\$ 115,392
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 26,765	\$ 26,765	\$ 26,765	\$ 26,765
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 26,765	\$ 26,765	\$ 26,765	\$ 26,765
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 133,824	\$ 133,824	\$ 133,824	\$ 133,824
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 8,029	\$ 8,029	\$ 8,029	\$ 8,029
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 18,735	\$ 18,735	\$ 18,735	\$ 18,735
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 8,029	\$ 8,029	\$ 8,029	\$ 8,029
	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 98,416	\$ 98,416		\$ -	\$ 98,416	
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 2,676		\$ 2,676	
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 98,416		\$ 410,480		\$ 508,897

NAT & NYPA - T026 - (Segment A, Base)

Estimate Revision: 5 Total: \$ 4,581,370

NAT & NYPA - T026 - (Segmen	t A, Bas	se)		
		Supply	Installation	Total
N. Interconnection Rotterdam Station				
1. CLEARING & ACCESS	\$	-	\$ 1,233,050	\$ 1,233,050
2. FOUNDATIONS	\$	192,145	\$ 325,963	\$ 518,108
3. STRUCTURES	\$	546,722	\$ 837,150	\$ 1,383,872
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	65,923	\$ 437,250	\$ 503,173
5. INSULATORS, FITTINGS, HARDWARE	\$	165,730	\$ 118,480	\$ 284,210
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	77,642	\$ 581,316	\$ 658,957
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,048,161	\$ 3,533,209	\$ 4,581,370
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:		1,048,161	\$ 3,533,209	4,581,370

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Interd	connection Rotterdam Station								
1. CLEARING 8	A ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	7.0	Acre	\$ -	\$ -	\$ 15,000	\$ 105,000	\$ 15,000	\$ 105,000
1.2	Clearing the ROW - Light (mowing)	5.0	Acre	\$ -	\$ -	,	\$ 25,000		
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	4,800.0	LF	\$ -	\$ -	\$ 4	-,	•	\$ 19,200
1.5	Matting - Access and ROW	4,800.0	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	2,400.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800		\$ 516,800	\$ -
1.8	ROW Restoration	1.0	Mile	\$ -	\$ -	,	\$ 10,000		
1.9	Work Pads	160,000.0	SF	\$ -	\$ -		\$ 563,200		\$ 563,200
1.10	Restoration for Work Pad areas	32,000.0	SF	\$ -	\$ -	\$ 0.2			
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	•	\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000		\$ 2,500	·	\$ 4,500	
1.16	Culverts / Misc. Access	-	EA	\$ 750		\$ 1,250		\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	СҮ	\$ 27	<u> </u>	\$ 75		\$ 102	
	RING & ACCESS				\$ -		\$ 1,233,050		\$ 1,233,050
2. FOUNDATIO				\$ 358	0.445	A 2.575	A 24.50	4 2.022	4 22 525
2.1	10' ED Rock BF	0	EA	'			•		
2.2	15' ED Rock BF	18	EA	\$ 536	-		· · · · · · · · · · · · · · · · · · ·		\$ 106,178
2.3	20' ED Rock BF	4	EA	\$ 715		\$ 7,150	\$ 28,600		\$ 31,460
2.4	Foundation – Drilled Pier – 8'X 29'	4	EA	\$ 44,372	\$ 177,487	\$ 44,847	\$ 179,388	\$ 89,219	\$ 356,875
2.5	Rock Excavation Adder	-	CY	\$ -	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ -		\$ -
2.11					\$ -		\$ -		\$ -

N. Interconnection Rotterdam Station

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		\$ -
2.14					\$ -		\$ -		\$ -
2.15					\$ -		\$ -		\$ -
TOTAL - FOUN					\$ 192,145		\$ 325,963		\$ 518,108
3. STRUCTURE									
3.1	15kV 3-CKT TANGENT DIST WOOD POLE	3	Pole	\$ 3,500			\$ 10,800		\$ 21,300
3.2	15KV 3-CKT MA DIST WOOD POLE	1	Pole	\$ 3,500			\$ 3,600		\$ 7,100
3.3	15kV 3-CKT DE - WOOD POLE	2	Pole	\$ 3,500					\$ 14,200
3.4	115kV 1-CKT TANGENT - WOOD POLE	5	Pole	\$ 4,500	\$ 22,500	\$ 4,400	\$ 22,000		\$ 44,500
3.5	115kV 1-CKT MA - WOOD POLE	2	Pole	\$ 4,500		\$ 4,400	\$ 8,800		\$ 17,800
3.6	115kV 1-CKT DE - WOOD POLE	11	Pole	\$ 5,500	\$ 60,500	\$ 5,000	\$ 55,000		\$ 115,500
3.7	115kV 2-CKT TANGENT - WOOD POLE	4	Pole	\$ 5,500		\$ 5,000	\$ 20,000		\$ 42,000
3.8	115kV 2-CKT DE - STEEL POLE	4	Pole	\$ 98,883					\$ 632,848
3.9	Remove Existing Structure	24	EA		\$ -	\$ 12,300	\$ 295,200	\$ 12,300	\$ 295,200
3.10					\$ -		\$ -		\$ -
3.11					\$ -		\$ -		\$ -
3.12	Install Grounding and Grounding Accessories	32	Pole	\$ 506	\$ 16,192	\$ 5,539	\$ 177,232	\$ 6,045	\$ 193,424
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
TOTAL - STRU	TURES				\$ 546,722		\$ 837,150		\$ 1,383,872
4. CONDUCTO	R, SHIELDWIRE, OPGW								
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	23,400	LF	\$ 1.90	\$ 44,460	\$ 5.00	\$ 117,000	\$ 6.90	\$ 161,460
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35	\$ -	\$ 5.00	\$ -	\$ 6.35	\$ -
4.3	(1) 3/8" EHS7 Steel	7,800	LF	\$ 0.47	\$ 3,666	\$ 5.00	\$ 39,000	\$ 5.47	\$ 42,666
4.5	Remove Existing Cable	6.6	Mile	\$ -	\$ -	\$ 30,000	\$ 197,700	\$ 30,000.00	\$ 197,700
4.6	Remove Existing EH7	2.2	Mile	\$ -	\$ -	\$ 12,000	\$ 26,400	\$ 12,000.00	\$ 26,400
4.7	15kV - (1) 477kcmil 26/7 ACSR "Hawk"	9,630	LF	\$ 1.62	\$ 15,601	\$ 5.00	\$ 48,150	\$ 6.62	\$ 63,751
4.8	15kV - (1) 336kcmil 26/7 ACSR "Linnet"	1,800	LF	\$ 1.22			\$ 9,000	\$ 6.22	\$ 11,196
4.9		-							
4.10	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$ 1,750	\$ -	\$ 3,500	\$ -	\$ 5,250.00	\$ -
TOTAL: COND	JCTOR, SHIELDWIRE, OPGW:				\$ 65,923		\$ 437,250		\$ 503,173
5. INSULATOR	FITTINGS, HARDWARE								
5.1	115kV Tangent (1-Group of 9-Bells Each Assembly)	33	Assembly	\$ 1,000	\$ 33,000	\$ 560	\$ 18,480	\$ 1,560	\$ 51,480
5.2	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	66	Assembly	\$ 1,000	\$ 66,000	\$ 560	\$ 36,960	\$ 1,560	\$ 102,960
5.3	15kV Tangent	12	Assembly	\$ 100	\$ 1,200	\$ 75	\$ 900	\$ 175	\$ 2,100
5.4	15kV Dead-end & Angle Insulators	18	Assembly	\$ 100	\$ 1,800	\$ 75	\$ 1,350	\$ 175	\$ 3,150
5.5	Neutral, Distribution, Tangent	4	Assembly	\$ 100	\$ 400	\$ 75	\$ 300	\$ 175	\$ 700
5.6	Neutral, Distribution, DE/Side	2	Assembly	\$ 100	\$ 200		\$ 150	\$ 175	\$ 350
5.7	Jumper, DE/Angle, 3PH	4	Assembly	\$ 100	\$ 400		\$ 300	\$ 175	\$ 700
5.8	OPGW Assembly - Tangent	2	Assembly	\$ 200	\$ 400	\$ 150	\$ 300	\$ 350	\$ 700
5.9	OSHW Assembly - Tangent	11	Assembly	\$ 250	\$ 2,750	\$ 150	\$ 1,650	\$ 400	\$ 4,400
5.10	OHSW Assembly - Angle / DE	38	Assembly	\$ 250			\$ 5,700	\$ 400	\$ 15,200
									-
5.11	OPGW Splice 8 Tech	-	Set			7 -/	\$ -	\$ 3,496	\$ - \$ -
5.12	OPGW Splice & Test		EA EA	\$ 1,400	\$ -	\$ 2,520	Ÿ	\$ 3,920	7
5.13	Spacer - Conductor	-	EA FA	\$ 50			\$ -	\$ 85 \$ 70	\$ - \$ -
5.14	Vibration Dampers - Conductor Chiadduira / ORCW Dampers Mice Fittings	-	EA	\$ 35 \$ 27			\$ -		•
5.15 5.16	Shieldwire / OPGW Dampers, Misc. Fittings	14.0	EA EA	\$ 27			\$ - \$ 12,200	\$ 62 \$ 1,605	\$ - \$ 22,470
	Guys, Anchors, and Accessories			+			\$ 12,390		
5.17 5.18	Misc. materials (Signs and Markers)	-	Mile	\$ 770	\$ -		\$ - \$ -	\$ 1,776	\$ -
5.18	Interconnection Arrangements	8	EA	\$ 5,000				\$ 10,000	
5.20			31	. 5,500	\$ -		\$ -	. 10,000	\$ -
5.21					\$ -		\$ -		\$ -
5.22					\$ -		\$ -		\$ -
5.23					\$ -		\$ -		\$ -
	ATOR, FITTINGS, HARDWARE				\$ 165,730		\$ 118,480		\$ 284,210
N. Interd	onnection Rotterdam Station				\$ 970,519		\$ 2,951,893		\$ 3,922,412
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								-,,
O. IVIOB/ DEIVIC	D, LINGHALLINING, FERNITTHING, TAC, FINI & HADIRECTS:								Page 48 of 55

Item	Item Description Estimated Quantity		Estimated Quantity Unit of Measure Material		Material Supply Rate Material Supply Cost		Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Contractor Mobilization / Demobilization									
6.1	Mob / Demob	1	LS	\$ -	\$	-	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 169,109	\$ 169,109	\$ 169,109	\$ 169,109
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 39,224	\$ 39,224	\$ 39,224	\$ 39,224
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 196,121	\$ 196,121	\$ 196,121	\$ 196,121
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 11,767	\$ 11,767	\$ 11,767	\$ 11,767
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 27,457	\$ 27,457	\$ 27,457	\$ 27,457
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 11,767	\$ 11,767	\$ 11,767	\$ 11,767
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 77,642	\$	77,642	\$ -	\$ -	\$ 77,642	\$ 77,642
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 3,922	\$ 3,922	\$ 3,922	\$ 3,922
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	77,642		\$ 581,316		\$ 658,957

Page 49 of 55 N. In. Rotterdam SS

ITC - T031 - (Segment A) Q. Princetown Switchyard - Install

5		Total:	\$	34,974,270		
ITC - T031	- (Segment A)					
		Supply		Installation		Total
Q. Princetown Switchyard - Install						
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	294,850	\$	2,117,725	\$	2,412,575
2. SUBSTATION FOUNDATIONS	\$	2,731,032	\$	2,787,932	\$	5,518,964
3. SUBSTATION STRUCTURES	\$	1,315,350	\$	1,315,350	\$	2,630,700
4. MAJOR EQUIPTMENT	\$	2,400,000	\$	960,000	\$	3,360,000
5. SMALL EQUIPTMENT / MATERIALS	\$	2,922,000	\$	1,410,000	\$	4,332,000
6. CONTROL HOUSE / PANELS	\$	3,361,350	\$	2,023,350	\$	5,384,700
7. MISC ITEMS	\$	1,492,750	\$	2,842,330	\$	4,335,080
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,161,387	\$	5,838,865	\$	7,000,251
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	15,678,719	\$	19,295,552	\$	34,974,270
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL	ć	15 679 710	ć	10 205 552	ć	24 974 270

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Jesci	μu	OH O	Wor	٨.

Estimate Revision:

1. STREPREY GRADING FENCING CYN.	Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1.1 Site Works including clearing, sediment controls, rough grading, and final grading. 8.13 ACRES \$. \$. \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 1,649,375 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,000 \$ 203,00	Q. Prince	etown Switchyard - Install									
12 Station storie within substation fence. 2,000 CY 5 27 5 54,000 5 77 5 159,000 5 102 5 204,000	1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.3 Substation Fence	1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	8.13	ACRES	\$	-	\$ -	\$ 203,000	\$ 1,649,375	\$ 203,000	\$ 1,649,37
1.4	1.2	Station stone within substation fence.	2,000	CY	\$	27	\$ 54,000	\$ 75	\$ 150,000	\$ 102	\$ 204,00
1.5	1.3	Substation Fence	2,300	LF	\$	100	\$ 230,000	\$ 100	\$ 230,000	\$ 200	\$ 460,00
1.6 Permanent Access Road - 20'-Wide (Extend Existing) 310 LF S 3S S 10.850 S 285 S 88,350 S 320 \$ 99,200 1.7 1.8 1.9 1.10 1.11 1.11 1.12 1.13 1.14 1.15 1.14 1.15 1.15 1.14 1.15 1.15	1.4										
1.7 1.8 1.9 1.10 1.10 1.11 1.11 1.12 1.13 1.14 1.15 1.15 1.17 1.16 1.17 1.17 1.18 1.19 1.19 1.19 1.10 1.10 1.10 1.11 1.11	1.5										
1.8		Permanent Access Road - 20'-Wide (Extend Existing)	310	LF	\$	35	\$ 10,850	\$ 285	\$ 88,350	\$ 320	\$ 99,20
1.9											
1.10											
1.11											
1.12											
1.13											
1.14											
1.15											
S 294,850 S 2,117,725 S 2,412,575											
2.1 Tesky											
2.1 765KV							\$ 294,850		\$ 2,117,725		\$ 2,412,57
2.1a Circuit Breaker Foundations EA. \$ 22,410 \$ \$ \$ \$ \$ \$ \$ \$ \$	2. SUBSTATIO										
2.1b Capacitor Bank Foundations 0 EA \$ 56,025 \$. \$ 60,000 \$. \$ 116,025 \$. \$ 2.1c Caisson DE Foundations (for DE A frame str stand alone) EA \$ 52,290 \$. \$ 56,000 \$. \$ 108,290 \$. \$ 2.1d Caisson DE Foundations (for DE A frame str shared column) EA \$ 52,290 \$. \$ 56,000 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$ 108,290 \$. \$. \$ 108,290 \$. \$. \$ 108,290 \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$											
2.1c Caisson DE Foundations (for DE A frame str stand alone)	2.1a	Circuit Breaker Foundations		EA.	\$				т		
2.1d Caisson DE Foundations (for DE A frame str shared column) EA. \$ 52,290 \$ - \$ 56,000 \$ - \$ 108,290 \$ - \$ 2.1e Switch Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1f Station Service Transformer Stand Foundation EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 9,282 \$ - \$ 2.1g Bus Support 1ph Foundations (High Bus) EA. \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$			0								
2.1e Switch Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1f Station Service Transformer Stand Foundation EA. \$ 8,964 \$ - \$ 4,880 \$ - \$ 9,282 \$ - \$ 2.1g Bus Support 1ph Foundations (High Bus) EA. \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$											
2.1f Station Service Transformer Stand Foundation 0 EA \$ 4,482 \$ -		Caisson DE Foundations (for DE A frame str shared column)			<u> </u>		\$ -		\$ -		
2.1g Bus Support 1ph Foundations (High Bus) EA. \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$					<u> </u>		7		7		
2.1h Bus Support 1 Ph Foundations (Low Bus) EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1j Instrument Transformer Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 5 8,964 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,9			0			4,482	•	\$ 4,800	\$ -		•
2.1j Instrument Transformer Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928							Ÿ	•	7		T
2.1k Arrester Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ - \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 \$ 17,928 <td></td> <td>Bus Support 1 Ph Foundations (Low Bus)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		Bus Support 1 Ph Foundations (Low Bus)									
2.1m Wave Trap Stand Foundations EA. \$ 8,964 \$ - \$ 8,964 \$ - \$ 17,928 \$ - \$ 2.1n 2.1n Misc. Structure Foundations EA. \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -							\$ -		\$ -		
2.1n Misc. Structure Foundations EA. \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$					<u> </u>		7		7		
2.1p Image: Control of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of					-	8,964	т	\$ 8,964	т		
2.2 345kV 2.2a Circuit Breaker Foundations 12 EA. \$ 14,940 \$ 179,280 \$ 14,940 \$ 179,280 \$ 29,880 \$ 358,560		Misc. Structure Foundations		EA.	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.2a Circuit Breaker Foundations 12 EA. \$ 14,940 \$ 179,280 \$ 14,940 \$ 179,280 \$ 29,880 \$ 358,560	2.1p										
2.2a Circuit Breaker Foundations 12 EA. \$ 14,940 \$ 179,280 \$ 14,940 \$ 179,280 \$ 29,880 \$ 358,560					_						
2.2b Capacitor Bank Foundations 0 EA \$ 44,820 \$ - \$ 48,000 \$ - \$ 92,820 \$ -					-						
	2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	32	EA.	\$ 26,145	\$ 836,640	\$ 26,145	\$ 836,640	\$ 52,290	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA.	\$ 26,145	•	\$ 26,145		\$ 52,290	
2.2e	Switch Stand Foundations	144	EA.	\$ 4,482	. ,			\$ 8,964	
2.2f	Station Service Transformer Stand Foundation	6	EA.	\$ 4,482	\$ 26,892			\$ 8,964	
2.2g	Bus Support 1ph Foundations (High Bus)	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations (Low Bus)	86	EA.	\$ 4,482	\$ 385,452				\$ 770,904
2.2j 2.2k	Instrument Transformer Stand Foundations Arrester Stand Foundations	78 24	EA.	\$ 4,482 \$ 4,482	\$ 349,596 \$ 107,568		\$ 349,596 \$ 107,568	\$ 8,964 \$ 8,964	\$ 699,192 \$ 215,136
2.2M	Wave Trap Stand Foundations	8	EA.	\$ 4,482	\$ 35,856		\$ 35,856		\$ 71,712
2.2m	Misc. Structure Foundations	8	EA.	\$ -	\$ -	\$ -	\$ 33,830	\$ -	\$ 71,712
2.2p	Misc. Structure i danadeoris		L7 ti	<u> </u>	Ÿ	Ÿ	Ÿ	Ý	<u> </u>
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -		\$ -	\$ 10,829	
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	
2.3d 2.3e	Caisson DE Foundations (for DE A frame str shared column) Switch Stand Foundations	0	EA EA	\$ 16,434 \$ 2,988	\$ - \$ -		\$ - \$ -	\$ 34,034 \$ 6,188	•
2.3e 2.3f	Fuse Stand Foundations	0	EA EA	\$ 2,988	\$ - \$ -		\$ -	\$ 6,188 \$ 6,188	
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3k	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	765-345kV Transformer Foundation w/ Oil Containment	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	765-345kV Transformer Fire Wall	0	EA.	\$ 106,074	\$ -	\$ 113,600	\$ -	\$ 219,674	\$ -
2.4c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5 2.5a	Control House Foundations / Pad / Generator / Station Service Distribution Line Control House / Pad - 35' x 95'	1	EA	\$ 100,845	\$ 100,845	\$ 108,000	\$ 108,000	\$ 208,845	\$ 208,845
2.5a 2.5b	Generator Foundation	1	EA	\$ 100,845	. ,				\$ 208,845
2.5c	Station Service Distribution Line - 3ph.	1	LS	\$ 10,434	\$ 16,434 \$ -		· · · · · · · · · · · · · · · · · · ·	\$ 45,240	. ,
2.6	Lightning Mast Foundations	1	LJ	, -	, -	7 45,240	ÿ 43,240	3 43,240	3 43,240
2.6a	70' Lightning Mast Foundation	9	EA	\$ 5,229	\$ 47,061	\$ 5,600	\$ 50,400	\$ 10,829	\$ 97,461
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	STATION FOUNDATIONS				\$ 2,731,032		\$ 2,787,932		\$ 5,518,964
	ON STRUCTURES								
3.1	765kV		F.*	A	ć	A	ć	ć 222.055	^
3.1a	Substation A-Frame Structures - Stand alone		EA.	\$ 111,000	\$ -		\$ -	\$ 222,000	•
3.1b 3.1c	Substation A-Frame Structures - Shared Column Switch Stands		EA. EA.	\$ 111,000 \$ 22,200	\$ - \$ -		\$ - \$ -	\$ 222,000 \$ 44,400	\$ - \$ -
		1				\$ 22,200	\$ -	\$ 44,400	\$ -
			FΛ					Ÿ -	
3.1d	Station Service Transformer Stand		EA.	\$ - \$ 7.400	\$ - \$ -		•	\$ 14 800	S -
3.1d 3.1e	Station Service Transformer Stand Bus Support 1ph (High Bus)		EA.	\$ 7,400		\$ 7,400	\$ -	\$ 14,800 \$ 11,100	
3.1d	Station Service Transformer Stand				\$ -	\$ 7,400 \$ 5,550	\$ -	\$ 14,800 \$ 11,100 \$ 7,400	\$ -
3.1d 3.1e 3.1f	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus)		EA. EA.	\$ 7,400 \$ 5,550	\$ - \$ -	\$ 7,400 \$ 5,550	\$ - \$ -	\$ 11,100	\$ - \$ -
3.1d 3.1e 3.1f 3.1g	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand		EA. EA. EA.	\$ 7,400 \$ 5,550 \$ 3,700	\$ - \$ - \$ -	\$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ -	\$ 11,100 \$ 7,400	\$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand		EA. EA. EA.	\$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700	\$ - \$ - \$ - \$ - \$ -	\$ 11,100 \$ 7,400 \$ 7,400	\$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast		EA. EA. EA. EA. EA.	\$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500	\$ - \$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone	8	EA. EA. EA. EA. EA.	\$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 9,250	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ \$ 74,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA. EA. EA. EA. EA. EA.	\$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 5,550 \$ 3,700 \$ 3,700 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 74,000 \$ 74,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b 3.2c	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone Switch Stands	0 24	EA. EA. EA. EA. EA. EA. EA. EA.	\$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 37,000 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 17,400 \$ 74,000 \$ 74,000 \$ 29,600	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
3.1d 3.1e 3.1f 3.1g 3.1h 3.1j 3.1k 3.2 3.2a 3.2b	Station Service Transformer Stand Bus Support 1ph (High Bus) Bus Support 1 Ph (low Bus) Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Mast 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA. EA. EA. EA. EA. EA.	\$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 9,250 \$ 37,000 \$ 37,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 7,400 \$ 5,550 \$ 3,700 \$ 9,250 \$ 9,250 \$ 9,250 \$ 9,250 \$ 14,800 \$ 14,800	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 11,100 \$ 7,400 \$ 7,400 \$ 18,500 \$ 18,500 \$ 17,400 \$ 74,000 \$ 74,000 \$ 29,600	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2g	Instrument Transformer Stand	78	EA	\$ 1,850	\$ 144,300	\$ 1,850	\$ 144,300	\$ 3,700	\$ 288,600
3.2h	Arrester Stand	24	EA	\$ 1,850	\$ 44,400	\$ 1,850	\$ 44,400	\$ 3,700	\$ 88,800
3.2i	Wave Trap Stand	8	EA	\$ 7,400	\$ 59,200	\$ 7,400	\$ 59,200	\$ 14,800	\$ 118,400
3.2j	Lightning Mast	9	EA.	\$ 9,250	\$ 83,250	\$ 9,250	\$ 83,250	\$ 18,500	\$ 166,500
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -	, , ,	\$ -	\$ 15,910	
3.3e	Bus Support 3ph	0	EA	\$ 3,330		\$ 3,330	\$ -	\$ 6,660	
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3h	Arrester Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TATION STRUCTURES				\$ 1,315,350		\$ 1,315,350		\$ 2,630,700
4. MAJOR EQU									
4.2	345kV								
4.2a	Circuit Breakers	12	EA	\$ 200,000	\$ 2,400,000		\$ 960,000	\$ 280,000	\$ 3,360,000
4.2b	Capacitor Banks		EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 60,000	\$ -	\$ 175,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAJO	 PR EQUIPTMENT				\$ 2,400,000		\$ 960,000		\$ 3,360,000
	IPTMENT / MATERIALS				2,400,000		3 300,000		3,300,000
5.2	345kV								
5.2a	Line Switches - 3ph w/ motor operator	8	EA	\$ 40,000	\$ 320,000	\$ 15,000	\$ 120,000	\$ 55,000	\$ 440,000
5.2b	Disconnect Switches - 3ph w/ manual operator	24	EA	\$ 35,000	\$ 840,000		\$ 420,000	\$ 52,500	\$ 1,260,000
5.2c	VT'S	24	EA	\$ 25,000	\$ 600,000		\$ 288,000	\$ 37,000	
5.2d	CT'S	24	EA	\$ 13,000	\$ 312,000	\$ 8,000	\$ 192,000	\$ 21,000	\$ 504,000
5.2e	CCVT'S	30	EA	\$ 13,000	\$ 390,000	\$ 8,000	\$ 240,000	\$ 21,000	\$ 630,000
5.2f	Arresters	24	EA	\$ 6,500	\$ 156,000	\$ 1,500	\$ 36,000	\$ 8,000	\$ 192,000
5.2g	Wave Traps	8	EA	\$ 13,000	\$ 104,000	\$ 8,000	\$ 64,000	\$ 21,000	\$ 168,000
5.2h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$ 250,000
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 28,000	\$ -	\$ 15,000	\$ -	\$ 43,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 33,000	\$ -	\$ 17,500	\$ -	\$ 50,500	\$ -
5.3c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	
5.3d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	•
5.3e	CCVT'S	0	EA	\$ 8,000	\$ -		\$ -	\$ 16,000	
5.3f	Arresters	0	EA	\$ 3,420	\$ -	\$ 6,000	\$ -	\$ 9,420	\$ -
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h 5.3j	Station Service Transformers Fuses	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.3	1 4363		EA.		V	Ÿ	Ÿ	<u>, </u>	*
	L EQUIPTMENT / MATERIALS				\$ 2,922,000		\$ 1,410,000		\$ 4,332,000
	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ 526,500	\$ 526,500	\$ 81,000	\$ 81,000	\$ 607,500	\$ 607,500
6.2	Protection and Telecom Equipment Panels	38	EA	\$ 35,000	\$ 1,330,000	\$ 10,000	\$ 380,000	\$ 45,000	\$ 1,710,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000			\$ 100,000	
6.4	Control Cables	1	LS						
6.5	SCADA and Communications	1		\$ 35,000					
6.6	Low Voltage AC Distribution	2		\$ 50,000	\$ 100,000				
6.7	DC Distribution System	2		\$ 50,000					
6.8	Security	1		\$ 7,500					
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,000

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
6.10	Generator	1	EA	\$	100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR					\$ 3,361,350		\$ 2,023,350		\$	5,384,700
7. MISC ITEMS	· · · · · · · · · · · · · · · · · · ·					\$ 3,301,330		\$ 2,023,330		Ş	5,384,700
7.1	Conduit & Cable Trench System		LF	\$	185.00	\$ -	\$ 231.27	\$ -	\$ 416.27	\$	-
7.2	Rigid Bus, Fittings & Insulators		LF	\$	515.95		\$ 237.10	\$ -	\$ 753.05	\$	-
7.3	Strain Bus, Connectors & Insulators		LF	\$	61.50	\$ -	\$ 78.69	\$ -	\$ 140.19	\$	-
7.4	Grounding System		LF	\$	6.93	\$ -	\$ 32.58	\$ -	\$ 39.51	\$	-
7.5	Strain Bus Insulators		EA	\$	4,000	\$ -	\$ 2,100	\$ -	\$ 6,100	\$	-
7.6	Control Cables		LS	\$	546,700		\$ 546,700		\$ 1,093,400		-
7.7	Control Conduits from Trench to Equipment		LS	\$	125,000	\$ -	\$ 125,000	\$ -	\$ 250,000	\$	-
7.8	Misc. Materials (Above and Below Ground)		LS	\$	180,000	\$ -	\$ 180,000	\$ -	\$ 360,000	\$	-
7.9											
7.10											
7.11											
7.12											
7.13											
7.14											
7. MISC ITEMS		2.500	15		125.07	ć 242.67F	ć 470.00	ć 425.000	ć 205		727.675
7.15	Conduit & Cable Trench System	2,500	LF	\$	125.07	\$ 312,675	\$ 170.00	\$ 425,000	\$ 295	\$	737,675
7.16	Rigid Bus, Fittings & Insulators	3,500	LF	\$	125.07	\$ 437,745	\$ 237.10	\$ 829,850	\$ 362	\$	1,267,595
7.17	Strain Bus, Connectors & Insulators	0	LF	\$	61.50	\$ -	\$ 78.69	\$ -	\$ 140	\$	-
7.18	Grounding System	31,000	LF	\$	6.93		\$ 32.58				1,224,810
7.19	Strain Bus Insulators - 345kV	0		\$	2,000		\$ 1,050		\$ 3,050		-
7.20	Low Voltage AC Station Service	1		\$	50,000				\$ 125,000		125,000
7.21	SSVT Service	1	LS	\$	50,000				\$ 125,000		125,000
7.22	Control Conduits from Trench to Equipment	1		\$	247,500		\$ 247,500		\$ 495,000	\$	495,000
7.23	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.24 7.25											
7.26											
7.27				1							
7.28											
7.29											
TOTAL - MISC	ITEMS					\$ 1,492,750		\$ 2,842,330		\$	4,335,080
O Prince	etown Switchyard - Install					\$ 14,517,332		\$ 13,456,687		Ś	27,974,019
				_		ÿ 14,517,532		3 13,430,007		7	27,574,015
8. MOR/DEMIC	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
8.1	Contractor Mobilization / Demobilization Mob / Demob	1	LS	\$	-	\$ -	\$ 279,740	\$ 279,740	\$ 279,740	ć	279,740
0.1	Project Management, Material Handling & Amenities		L3	1,		· -	\$ 275,740	3 2/3,/40	\$ 275,740	,	2/3,/40
	Project Management, Material Handling & Amenides										
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 1,206,058	\$ 1,206,058	\$ 1,206,058	\$	1,206,058
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 279,740	\$ 279,740	\$ 279,740	\$	279,740
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 279,740		\$ 279,740		279,740
	Engineering		-	1			2,7.10	.,	-,	Ė	
8.5	Design Engineering	1	LS	\$		\$ -	\$ 2,237,922	\$ 2,237,922	\$ 2,237,922	\$	2,237,922
8.6	LiDAR	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.7	Geotech	4		\$		\$ -	\$ 3,500				14,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 195,818	\$ 195,818	\$ 195,818	\$	195,818
	Testing & Commissioning			1.							
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 699,350	\$ 699,350	\$ 699,350	\$	699,350
L	Permitting and Additional Costs		, -	1		_	•	_			
8.10	Environmental Licensing & Permitting Costs	-	LS	\$		\$ -		\$ -	\$ -	\$	-
8.11	Environmental Mitigation	- 1	LS	\$		\$ -		\$ -	\$ -	\$	92 022
8.12	Warranties / LOC's	1		\$		\$ - \$ -	\$ 83,922 \$ -				83,922
8.13 8.14	Real Estate Costs (New) Real Estate Costs (Incumbent Utility)	1	LS LS	\$	-		\$ - \$ 534,600	'		\$	534,600
0.14	near Estate Costs (medifiberit Othicy)	1	LJ	۲۹	-	- ب	354,000 ب	354,000 د ا	334,000 د ا) D-	

Item	item Description	Estimated Quantity	Unit of Measure	Material Su	upply Rate	Material Supply Cost	La	abor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.15	Legal Fees	-	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
8.17			LS	\$	-	\$ -	\$	-	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	1,161,387	\$ 1,161,387	7 \$	-	\$ -	\$ 1,161,387	\$ 1,161,387
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$	27,974	\$ 27,974	\$ 27,974	\$ 27,974
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,161,387	7		\$ 5,838,865		\$ 7,000,251

Page 54 of 55

schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.). We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days). All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017. We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type. Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not et information to provide a quantified estimate for this item, allowance is included in the contingency monies. Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for for quotes. Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing. A Contractor Mark-Up (OH&P) of 15% has been included in the Total section. We have assumed that all project details provided are accurate unless noted otherwise. A contractor allowance of 1% for mobilization and demobilization has been included in the total section. A contractor allowance of 3.698% for project management and staffing has been included in the total section. A contractor allowance of 1% for transmission design and engineering has been included in the total section. An allowance of 5% for transmission design and engineering has been included in the total section. An allowance of 0.7% for substation design and engineering has been included in the total section. An allowance of 0.7% for substation design and engineering has been included in the total section. An allowance of 0.7% for substation design and engineering has been included in the total section. An allowance of 0.7%		ITC - T031 - (Segment A)
Construction schedule is in accordance with proposed schedule - we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction activities (i.e. permitting activities, material procurement etc.). We have assumed a typical work week of five-(5) days per week at ten-(10) hour days). All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017. We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type. Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not el information to provide a quantified estimate for this item, allowance is included in the contingency monies. Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for for quotes. Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing. A Contractor Mark-Up (OH&P) of 15% has been included in the Total section. We have assumed that all project details provided are accurate unless noted otherwise. Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%) A contractor allowance of 1% for mobilization and demobilization has been included in the total section. A contractor allowance of 3.598% for project management and staffing has been included in the total section. A nallowance of 5% for transmission design and engineering has been included in the total section. An allowance of 5% for substation design and engineering has been included in the total section. An allowance of 0.7% for substation design and engineering has been included in the total section. An allowance of 0.7% for substation design and engineering has been		ESTIMATE ASSUMPTIONS & CLARIFICATIONS
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7 quotes. 8 Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing. 9 A Contractor Mark-Up (OH&P) of 15% has been included in the Total section. 10 We have assumed that all project details provided are accurate unless noted otherwise. 11 Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%) 12 A contractor allowance of 1% for mobilization and demobilization has been included in the total section. 13 A contractor allowance of 3.698% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safet inspector, compliance inspector, environmental inspector, and SWPP inspector. 14 An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section. 15 A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section. 16 An allowance of 5% for transmission design and engineering has been included in the total section. 17 An allowance of 8% for substation design and engineering has been included in the total section. 18 An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section. 19 An allowance of 0.3% for LIDAR of the transmission line has been included in the total section. 20 An allowance of 3.75% for substation testing and commissioning has been included in the total section.	0	
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	19	
21 An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.	20	
		An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
New York state sales tax of 8% is included in all material pricing.	22	New York state sales tax of 8% is included in all material pricing.
23 An allowance of 1.5% for insurance is included in the DPS sheet.	23	An allowance of 1.5% for insurance is included in the DPS sheet.



		National Grid and NY Transco (T019)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$34,641
	1.2	Foundations	\$44,405
	1.3	Structures	\$56,279
	1.4	Conductor, Shiedwire and OPGW	\$30,070
	1.5	Insulators, Fitting and Hardwares	\$11,200
		Subtotal (1)	\$176,595
	2	Substations	
Direct Cost	2.1	Knickerbocker Substation	\$26,306
rect	2.2	East Greenbush Substation	\$61
	2.3	Schodack Substation	\$2,226
	2.4	Churchtown Substation	\$14,616
	2.5	Pleasant Valley Substation	\$6,939
	2.6	Substation Interconnections	\$5,534
		Subtotal (2)	\$55,682
		Total (1+2)	\$232,277
		Contractors Mark-up (15% of Total 1+2)	\$34,842
		Total Direct Cost (A)	\$267,118
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,323
st	3.2	Project Management, Material Handling & Amenities	\$16,172
Indirect Cost	3.3	Engineering	\$15,527
lirec	3.4	Testing & Commissioning	\$1,324
l u	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$16,982
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,428
		Total Indirect Cost (3)	\$59,755
		Subtotal Project Cost (B=A+3) 2017 \$	\$326,874
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project (Fishkill and New Scotland Terminals)	\$1,085
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417
		Subtotal NUF Cost (C)	\$5,502
		Total Project Cost (B+C) 2017 \$	\$332,376
		Total Project Cost 2018 \$	\$342,347

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NG & NY Transco - T019 - (Segment B)

Estimate Revision: 5

	NG & NY Transco - T019 - (Segment B)	Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Knickerbocker to Churchtown	\$ 70,736,799
Direct Labor, Material & Equipment Costs	B. Transmission Line Churchtown to Pleasant Valley	\$ 101,111,607
Direct Labor, Material & Equipment Costs	C. Blue Stores Junction to Blue Stores Substation	\$ 4,746,361
Direct Labor, Material & Equipment Costs	D. Knickerbocker 345kV Substation - Install	\$ 26,306,261
Direct Labor, Material & Equipment Costs	E. Greenbush Substation - Removal	\$ 61,200
Direct Labor, Material & Equipment Costs	F. Schodack Substation - Install	\$ 2,089,357
Direct Labor, Material & Equipment Costs	G. Schodack Substation - Removal	\$ 136,200
Direct Labor, Material & Equipment Costs	H. Churchtown Substation - Install	\$ 13,652,332
Direct Labor, Material & Equipment Costs	I. Churchtown Substation - Removal	\$ 963,678
Direct Labor, Material & Equipment Costs	J. Pleasant Valley Substation - Install	\$ 6,898,903
Direct Labor, Material & Equipment Costs	K. Pleasant Valley Substation - Removal	\$ 40,500
Direct Labor, Material & Equipment Costs	L. Interconnection Knickerbocker Station	\$ 3,068,229
Direct Labor, Material & Equipment Costs	M. Interconnection Churchtown Station	\$ 1,881,925
Direct Labor, Material & Equipment Costs	N. Interconnection Milan Station	\$ 583,388
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Cricket Valley Line Upgrade)	\$ 3,155,160
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations Knickerbocker to Pleasant Valley)	\$ 774,000
	SUBTOTAL:	\$ 236,205,900
	CONTRACTOR MARK-UP (OH&P)	\$ 35,430,885
	CONTINGENCY ON ENTIRE PROJECT	\$ -
	TOTAL DIRECT:	\$ 271,636,785

	NG & NY Transco - T019 - (Segment B)	Tota	l Each Segment
Indirect Costs	A. Transmission Line Knickerbocker to Churchtown	\$	15,568,288
Indirect Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	22,500,395
Indirect Costs	C. Blue Stores Junction to Blue Stores Substation	\$	943,735
Indirect Costs	D. Knickerbocker 345kV Substation - Install	\$	6,607,256
Indirect Costs	E. Greenbush Substation - Removal	\$	9,952
Indirect Costs	F. Schodack Substation - Install	\$	490,500
Indirect Costs	G. Schodack Substation - Removal	\$	22,149
Indirect Costs	H. Churchtown Substation - Install	\$	3,282,774
Indirect Costs	I. Churchtown Substation - Removal	\$	156,716
Indirect Costs	J. Pleasant Valley Substation - Install	\$	1,753,769
Indirect Costs	K. Pleasant Valley Substation - Removal	\$	7,477
Indirect Costs	L. Interconnection Knickerbocker Station	\$	559,427
Indirect Costs	M. Interconnection Churchtown Station	\$	319,787
Indirect Costs	N. Interconnection Milan Station	\$	105,632
Indirect Costs	O. System Upgrade Facilities (Cricket Valley Line Upgrade)	\$	788,790
Indirect Costs	P. System Upgrade Facilities (Various Stations Knickerbocker to Pleasant Valley)	\$	195,000
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitigation)	\$	7,427,609
	TOTAL INDIR	ECT: \$	60,739,258

Page 2 of 61
Direct & Indirect Totals

TOTAL ESTMATED COST: \$

A. Transmission Line Knickerbocker to Churchtown

NG & NY Transco - T019 - (Segment B)

Estimate Freuision: Total: \$ 86,305,087

NG & NY Transco - T019 -	(Segmen	t B)		
		Supply	Installation	Total
A. Transmission Line Knickerbocker to Churchtown				
1. CLEARING & ACCESS	\$	11,500	\$ 13,799,703	\$ 13,811,203
2. FOUNDATIONS	\$	9,710,029	\$ 10,978,019	\$ 20,688,047
3. STRUCTURES	\$	9,422,041	\$ 10,929,158	\$ 20,351,199
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	2,367,420	\$ 8,759,465	\$ 11,126,885
5. INSULATORS, FITTINGS, HARDWARE	\$	3,150,161	\$ 1,609,303	\$ 4,759,465
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,972,892	\$ 13,595,396	\$ 15,568,288
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	26,634,043	\$ 59,671,044	\$ 86,305,087
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	26,634,043	\$ 59,671,044	\$ 86,305,087

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Mat	erial Supply Rate	Material Supply Sum	Labor & Equi Supply Ra		Labor & Equipment Sum	Total Unit Rate		TOTAL
A. Trans	mission Line Knickerbocker to Churchtown											
1. CLEARING 8	ACCESS											
1.1	Clearing the ROW - Heavy (mowing & clearing)	23.0	Acre	\$	-	\$ -	\$	15,000	\$ 345,000	\$ 15,000	\$	345,000
1.2	Clearing the ROW - Light (mowing)	63.0	Acre			\$ -	\$	5,000	\$ 315,000	\$ 5,000	\$	315,000
1.3	Access Road	23,126	LF	\$	-	\$ -	\$	45.00				1,040,688
1.4	Silt Fence	115,632	LF	\$	-	\$ -	\$	4.00			\$	462,528
1.5	Matting - Access and ROW	92,506	LF	\$	-	\$ -	\$	70.00	\$ 6,475,392			6,475,392
1.6	Matting - To Work Area	16,575	LF	\$	-	\$ -	\$		\$ 1,160,250			1,160,250
1.7	Snow Removal	21.9	Mile	\$	-	\$ -		16,000	\$ 350,400		\$	350,400
1.8	ROW Restoration	21.9	Mile	\$	-	\$ -		10,000	\$ 219,000			219,000
1.9	Work Pads	850,000	SF	\$	-	\$ -	\$	3.52			\$	2,992,000
1.10	Restoration for Work Pad areas	170,000	SF	\$	-	\$ -	\$	0.15				25,500
1.11	Temporary Access Bridge	9	EA	\$	-	\$ -		20,035	, , , , , , , , , , , , , , , , , , , ,			180,315
1.12	Air Bridge		EA	\$	-		+	14,445		\$ 14,445	\$	-
1.13 1.14	Stabilized Construction Entrance Maintenance and Protection of Traffic on Public Roads	47	EA EA	\$	-	· .	\$	4,580 4,130	\$ 18,320 \$ 194,110	\$ 4,580 \$ 4,130	\$	18,320 194,110
1.14	Culverts / Misc. Access	10	EA	\$	750	\$ - \$ 7,500		1,250			Ś	20,000
1.15	Gates	2	EA	\$	2,000	\$ 4,000		2,500			è	9,000
1.17	Concrete Washout Station	2	EA	\$	2,000	\$ 4,000	Ś	1,850			Ś	3,700
	RING & ACCESS:		LA	7	-	\$ 11,500	1	1,830	\$ 13,799,703	7 1,030	Ś	13,811,203
2. FOUNDATIO						J 11,500			3 13,733,703		7	13,611,203
	Drilled Pier - 115/345kV Double Ckt H- Pole Angle/DE	3	EA	Ś	133,937	\$ 401,811		.35,372	\$ 406,115	\$ 269,309	Ś	807,926
2.1				-			+			<u> </u>	7	
2.2	Drilled Pier - 115/345kV Double Ckt Single Pole Angle/ DE	21	EA	\$	156,123	\$ 3,278,583	-		\$ 3,313,695	<u> </u>	\$	6,592,278
2.3	Drilled Pier - 115/345kV Double Ckt Single Pole Tangent	133	EA	\$		\$ 4,699,302		35,712			_	9,448,932
2.4	Drilled Pier - 115kV Single Circuit H-Pole Angle/ DE	2	EA	\$	125,720	\$ 251,440		.27,067			\$	505,573
2.5	Drilled Pier - 115kV Single Circuit H-Pole Tangent	2	EA	\$	81,348	\$ 162,697		,	\$ 164,439	\$ 163,568	\$	327,136
2.6	Drilled Pier - 115kV Single Circuit Single Pole Angle/ DE	5	EA	\$	78,062	\$ 390,308	\$	78,898	\$ 394,488	\$ 156,959	\$	784,795
2.7	Drilled Pier - 345kV Single Circuit Single Pole DE	4	EA	\$	131,472	\$ 525,888	\$ 1	.32,880	\$ 531,520	\$ 264,352	\$	1,057,408
2.8	Rock Excavation Adder	582	СҮ	\$	-	\$ -	\$	2,000	\$ 1,164,000	\$ 2,000	\$	1,164,000
2.9										_		
2.10							1					
2.11												
2.12							+					
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2.13				1			+					
				-			+					
2.15				1			+					
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2.70 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.	Item	Item Description	Estimated Quantity	Unit of Measure	Material Su	upply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
TOTAL FOUNDATIONS	2.17											
STANCE	2.18											
3 15 15 15 15 15 15 15	TOTAL - FOUN	DATIONS:					\$ 9,710,029		\$ 10,978,019		\$	20,688,047
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4.1							\$ 9,422,041		\$ 10,929,158		\$	20,351,199
4.2 1(1) OF WS Fiber AC 33/28/77 123/31 UF S 1.35 16.002 S 5.00 S 61.815 S 6.35 S 780,007 4.3 1(1) 3/8° FISTS Schell												
4.4					+						-	
Mile Semove Existing Cable From Existing Structures 4.3.8 Mile S			·		\$						<u> </u>	
A					\$	0.47	\$ 57,065					
A					\$	-	\$ -					
A7 1154/- (1) 94cml 54/7 ACSS "Cardinal" 36,424 LF 5 1,90 5 69,026 5 5,00 5 1,321,205 5 6,90 5 2,513,263 A8 Rider Poles - Relocated 23 Set 5 5 5 5 5 5 3,500 5 80,000 5 3,500 5 A10 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11 A11		Remove Existing OPGW Cable and Accessories		Mile	7	-	\$ -	, , , , , , , , , , , , , , , , , , , ,		, , , , , , , , , , , , , , , , , , , ,	\$	
A	4.6	Remove Existing OHSW and Accessories	21.9	Mile	\$	-	Ψ	\$ 12,000		\$ 12,000.00	\$	262,800
A	4.7	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	364,241	LF	\$	1.90	\$ 692,058	\$ 5.00	\$ 1,821,205	\$ 6.90	\$	2,513,263
A.10	4.8	Rider Poles (47 Locations)	24	Set	\$	1,750	\$ 42,000	\$ 3,500	\$ 84,000	\$ 5,250.00	\$	126,000
A11	4.9	Rider Poles - Relocated	23	Set	\$	-	\$ -	\$ 3,500	\$ 80,500	\$ 3,500.00	\$	80,500
4.12 4.13 4.14 4.14 4.15 4.16 4.16 4.16 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.17 4.	4.10											
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S. INSULATOR, FITTINGS, HARDWARE S. 1. 345kV Tangent (1-Group of 18-Bells Each Assembly) G. 65 Assembly S. 1.800 S. 1.197,000 S. 720 S. 478,800 S. 2,520 S. 1,675,800	4.17											
5.1 345kV Tangent (1-Group of 18-Bells Each Assembly) 665 Assembly \$ 1,800 \$ 1,197,000 \$ 720 \$ 478,800 \$ 2,520 \$ 1,675,800 5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 671 Assembly \$ 900 \$ 603,900 \$ 550 \$ 375,760 \$ 1,600 \$ 979,660 5.3 345kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 420 Assembly \$ 1,800 \$ 750,000 \$ 720 \$ 302,400 \$ 2,520 \$ 1,058,400 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 217 Assembly \$ 900 \$ 195,300 \$ 560 \$ 12,152 \$ 1,600 \$ 316,820 5.5 Local Mangle Insulators (1-Group of 9-Bells Each Assembly) 2135 Assembly \$ 200 \$ 127,000 \$ 150 \$ 20,250 \$ 316,820	TOTAL: COND	UCTOR, SHIELDWIRE, OPGW:					\$ 2,367,420		\$ 8,759,465		\$	11,126,885
5.1 345kV Tangent (1-Group of 18-Bells Each Assembly) 665 Assembly \$ 1,800 \$ 1,197,000 \$ 720 \$ 478,800 \$ 2,520 \$ 1,675,800 5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 671 Assembly \$ 900 \$ 603,900 \$ 550 \$ 375,760 \$ 1,600 \$ 979,660 5.3 345kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 420 Assembly \$ 1,800 \$ 750,000 \$ 720 \$ 302,400 \$ 2,520 \$ 1,058,400 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 217 Assembly \$ 900 \$ 195,300 \$ 560 \$ 12,152 \$ 1,600 \$ 316,820 5.5 Local Mangle Insulators (1-Group of 9-Bells Each Assembly) 2135 Assembly \$ 200 \$ 127,000 \$ 150 \$ 20,250 \$ 316,820	5. INSULATOR	, FITTINGS, HARDWARE										
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5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 420 Assembly \$ 1,800 \$ 756,000 \$ 720 \$ 302,400 \$ 2,520 \$ 1,058,400 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 217 Assembly \$ 900 \$ 195,300 \$ 560 \$ 121,520 \$ 1,600 \$ 316,820 5.5 Assembly \$ 900 \$ 195,300 \$ 5.00 \$ 1,460 \$ 316,820 5.5 Assembly \$ 200 \$ 27,000 \$ 150 \$ 20,250 \$ 350 \$ 47,250 5.7 OPGW Assembly - Angle / DE 62 Assembly \$ 250 \$ 15,500 \$ 150 \$ 9,300 \$ 400 \$ 24,800 5.8 OHSW Assembly - Angle / DE 5 Assembly \$ 200 \$ 27,000 \$		- ' '			\$						_	
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5.10 OPGW Splice Boxes 8 Set \$ 1,746 \$ 13,969 \$ 2,274 \$ 18,192 \$ 4,020 \$ 32,161 5.11 OPGW Splice & Test 8 EA \$ 2,520 \$ 20,160 \$ 5,040 \$ 40,320 5.12 Spacer - Conductor 3,651 EA \$ 50 \$ 182,550 \$ 35 \$ 127,785 \$ 85 \$ 310,335 5.13 Vibration Dampers - Conductor 1,971 EA \$ 35 68,985 \$ 35 68,985 \$ 70 \$ 137,970	-			•					· · · · · · · · · · · · · · · · · · ·		_	
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5.13 Vibration Dampers - Conductor 1,971 EA \$ 35 \$ 68,985 \$ 35 \$ 68,985 \$ 70 \$ 137,970		 			1							
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5.14 Shield wire / OPGW Dampers, Misc. Fittings 442 EA \$ 27 \$ 11,934 \$ 35 \$ 15,470 \$ 62 \$ 27,404												
	5.14	Shield wire / OPGW Dampers, Misc. Fittings	442	EA	\$	27	\$ 11,934	\$ 35	\$ 15,470	\$ 62	\$	27,404

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Ma	aterial Supply Sum	Labor & Equipment Supply Rate	L	abor & Equipment Sum	Total Unit Rate	TOTAL
5.15	Guys, Anchors, and Accessories	-	EA	\$	720	\$	-	\$ 885	\$	-	\$ 1,605	\$ -
5.16	Misc. materials (Signs and Markers)	22	Mile	\$	770	\$	16,863	\$ 1,006	\$	22,031	\$ 1,776	\$ 38,894
5.17		-		\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:					\$	3,150,161		\$	1,609,303		\$ 4,759,465
A. Trans	mission Line Knickerbocker to Churchtown					\$	24,661,151		\$	46,075,648		\$ 70,736,799
6. MOB/DEMO	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:											
	Contractor Mobilization / Demobilization											
6.1	Mob / Demob	1	LS	\$	-	\$	-	\$ 707,368	\$	707,368	\$ 707,368	\$ 707,368
	Project Management, Material Handling & Amenities											
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS					\$ 3,510,137	\$	3,510,137	\$ 3,510,137	\$ 3,510,137
6.3	Utility PM and Project Oversite	1	LS			\$	-	\$ 707,368	\$	707,368	\$ 707,368	\$ 707,368
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$	-	\$ 707,368	\$	707,368	\$ 707,368	\$ 707,368
	Engineering											
6.5	Design Engineering	1	LS	\$	-	\$	-	\$ 3,536,840	\$	3,536,840	\$ 3,536,840	\$ 3,536,840
6.6	Lidar	1	LS	\$	-	\$	-	\$ 212,210	\$	212,210	\$ 212,210	\$ 212,210
6.7	Geotech	22	Location	\$	-	\$	-	\$ 3,500	\$	77,000	\$ 3,500	\$ 77,000
6.8	Surveying/Staking	1	LS	\$	-	\$	-	\$ 495,158	\$	495,158	\$ 495,158	\$ 495,158
	Testing & Commissioning											
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$	-	\$ 40,000	\$	40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs											
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 212,210	\$	212,210	\$ 212,210	\$ 212,210
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$	-	\$ 3,319,000	\$	3,319,000	\$ 3,319,000	\$ 3,319,000
6.15	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
6.17		-	LS	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$	1,972,892	\$	1,972,892	\$ -	\$	-	\$ 1,972,892	\$ 1,972,892
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 70,737	\$	70,737	\$ 70,737	\$ 70,737
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	1,972,892		\$	13,595,396		\$ 15,568,288

NG & NY Transco - T019 - (Segment B)

B. Transmission Line Churchtown to Pleasant Valley

Estimate Revision: 5 Total: \$ 123,612,003

NG & NY Transco - T019 - (Segme	ent B)		
		Supply	Installation	Total
B. Transmission Line Churchtown to Pleasant Valley				
1. CLEARING & ACCESS	\$	14,000	\$ 19,410,966	\$ 19,424,966
2. FOUNDATIONS	\$	5,416,314	\$ 17,138,320	\$ 22,554,633
3. STRUCTURES	\$	12,430,954	\$ 21,953,334	\$ 34,384,288
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,505,234	\$ 14,965,685	\$ 18,470,919
5. INSULATORS, FITTINGS, HARDWARE	\$	4,145,919	\$ 2,130,882	\$ 6,276,801
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	2,040,994	\$ 20,459,402	\$ 22,500,395
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	27,553,414	\$ 96,058,589	\$ 123,612,003
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	27,553,414	\$ 96,058,589	\$ 123,612,003

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material S	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Trans	mission Line Churchtown to Pleasant Valley									
1. CLEARING	& ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	17.0	Acre	\$	-	\$ -	\$ 15,000	\$ 255,000	\$ 15,000	\$ 255,000
1.2	Clearing the ROW - Light (mowing)	116.0	Acre	\$	-	\$ -	\$ 5,000	\$ 580,000	\$ 5,000	\$ 580,000
1.3	Access Road	34,109	LF	\$	-		\$ 45			1,534,896
1.4	Silt Fence	170,544.0	LF	\$			\$ 4			\$ 682,176
1.5	Matting - Access and ROW	136,435	LF	\$			\$ 70			9,550,464
1.6	Matting - To Work Area	16,275.0	LF	\$	-		\$ 70			1,139,250
1.7	Snow Removal	32.3	Mile	\$	-	\$ -	\$ 16,000	\$ 516,800	\$ 16,000	516,800
1.8	ROW Restoration	32.3	Mile	\$	-	\$ -	\$ 10,000	\$ 323,000		323,000
1.9	Work Pads	1,155,000.0	SF	\$			\$ 4	, , , , , , , , , , , , , , , , , , , ,		\$ 4,065,600
1.10	Restoration for Work Pad areas	231,000.0	SF	\$		'		\$ 34,650		\$ 34,650
1.11	Temporary Access Bridge	14	EA	\$			\$ 20,035	\$ 280,490		280,490
1.12	Air Bridge	-	EA	\$		\$ -	\$ 14,445	\$ -	\$ 14,445	-
1.13	Stabilized Construction Entrance	12	EA	\$		\$ -	\$ 4,580		\$ 4,580	54,960
1.14	Maintenance and Protection of Traffic on Public Roads	86	EA	\$		\$ -	\$ 4,130			355,180
1.15	Gates	4	EA	\$	2,000					18,000
1.16	Culverts / Misc. Access	8	EA	\$	750		\$ 1,250			16,000
1.17	Concrete Washout Station	10	EA	\$	-	_	\$ 1,850		\$ 1,850	18,500
	RING & ACCESS:					\$ 14,000		\$ 19,410,966		\$ 19,424,966
2. FOUNDATI										
2.1	Drilled Pier - 115/345kV Double Ckt Single Pole Angle/ DE	25	EA	\$	52,589	\$ 1,314,720		\$ 1,328,800	\$ 105,741	 2,643,520
2.2	Drilled Pier - 115/345kV Double Ckt Single Pole Tangent	202	EA	\$	19,349	\$ 3,908,494	\$ 19,556	\$ 3,950,352	\$ 38,905	\$ 7,858,846
2.3	Drilled Pier - 115kV Single Circuit Single Pole Angle/ DE	3	EA	\$	46,837	\$ 140,511	\$ 47,339	\$ 142,016	\$ 94,175	\$ 282,526
2.4	Drilled Pier - 345kV Single Circuit Single Pole DE	1	EA	\$	52,589	\$ 52,589	\$ 53,152	\$ 53,152	\$ 105,741	\$ 105,741
2.5	Rock Excavation Adder	5,832.0	CY	\$	-	\$ -	\$ 2,000	\$ 11,664,000	\$ 2,000	\$ 11,664,000
2.6										
2.7										
2.8										
2.9										
2.10										
2.11										
2.12										
TOTAL - FOUN	IDATIONS:					\$ 5,416,314		\$ 17,138,320		\$ 22,554,633
3. STRUCTUR	ES CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY					, .,		, , , , , , , , , , , , , , , , , , , ,		,,
3.1	115/345kV Double Ckt Single Pole Angle/ DE	25	Structure	\$	115,090	\$ 2,877,259	\$ 69,054	\$ 1,726,355	\$ 184,145	\$ 4,603,614
3.2	115/345kV Double Ckt Single Pole Tangent	202	Structure	\$	45,131	\$ 9,116,367	\$ 27,078	\$ 5,469,820	\$ 72,209	\$ 14,586,187

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV Single Circuit Single Pole Angle/ DE	3	Structure	\$ 79,163	\$ 237,490	\$ 47,498	\$ 142,494	\$ 126,661	\$ 379,984
3.4	345kV Single Circuit Single Pole DE	1	Structure	\$ 82,952	\$ 82,952	\$ 49,771	\$ 49,771	\$ 132,723	\$ 132,723
3.5						·			
3.6									
3.7									
3.8									
3.9									
3.10									
3.11									
3.12	Remove Existing Foundation	2,084	EA	\$ -	\$ -	\$ 3,250	\$ 6,773,000	\$ 3,250	\$ 6,773,000
3.13	Remove Existing Structure and Accessories	521	EA	\$ -	\$ -	\$ 12,500	\$ 6,512,500	\$ 12,500	\$ 6,512,500
3.14									
3.15	Install Grounding and Grounding Accessories	231	Pole	\$ 506	\$ 116,886	\$ 5,539	\$ 1,279,394	\$ 6,045	\$ 1,396,280
3.16									
3.17									
	CTURES PRINCTOWN TO NEW SCOTLAND:				\$ 12,430,954		\$ 21,953,334		\$ 34,384,288
	DR, SHIELDWIRE, OPGW								
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	1,087,733	LF	\$ 1.90	\$ 2,066,693	\$ 5.00	\$ 5,438,665	\$ 6.90	\$ 7,505,358
4.2	(1) OPGW 36 Fiber AC-33/38/571	181,289	LF	\$ 1.35	\$ 244,740	\$ 5.00	\$ 906,445	\$ 6.35	\$ 1,151,185
4.3	(1) 3/8" EHS7 Steel	181,289	LF	\$ 0.47	\$ 85,206	\$ 5.00	\$ 906,445	\$ 5.47	\$ 991,651
4.5	Remove Existing 115kV Cable From Existing Structures	130.4	Mile	\$ -	\$ -	\$ 30,000	\$ 3,912,000	\$ 30,000.00	\$ 3,912,000
4.6	Remove Existing OPGW Cable and Accessories	32.6	Mile	\$ -	\$ -	\$ 12,000	\$ 390,600	\$ 12,000.00	\$ 390,600
4.7	Remove Existing OHSW and Accessories	32.6	Mile	\$ -	\$ -	\$ 12,000	\$ 391,200	\$ 12,000.00	\$ 391,200
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	543,866	LF	\$ 1.90	\$ 1,033,345	\$ 5.00	\$ 2,719,330	\$ 6.90	\$ 3,752,675
4.9									
4.10	Rider Poles - Relocated	43	Set	\$ -	\$ -	\$ 3,500	\$ 150,500		· · · · · · · · · · · · · · · · · · ·
4.11	Rider Poles (86 Total)	43	EA	\$ 1,750		\$ 3,500		\$ 5,250.00	· · · · · · · · · · · · · · · · · · ·
	UCTOR, SHIELDWIRE, OPGW:				\$ 3,505,234		\$ 14,965,685		\$ 18,470,919
	R, FITTINGS, HARDWARE	4.040		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 720	4 727.200	4 2.520	4 2555
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,010	Assembly	\$ 1,800					
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	1,010	Assembly	\$ 900		\$ 560	\$ 565,600		\$ 1,474,600
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	390	Assembly	\$ 1,800 \$ 900		\$ 720 \$ 560			\$ 982,800
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	196	Assembly	\$ 900		\$ 560	\$ 109,760	\$ 1,460	\$ 286,160
5.5	ODCW Assembly Toward	202	Assembly	¢ 300	\$ -	ć 450	\$ -	\$ -	\$ -
5.6	OPGW Assembly - Tangent	202	Assembly	\$ 200		\$ 150	\$ 30,300	·	\$ 70,700
5.7	OPGW Assembly - Angle / DE	52	Assembly	\$ 250		\$ 150	\$ 7,800	\$ 400	\$ 20,800
5.8	OHSW Assembly - Tangent	202 56	Assembly	\$ 200 \$ 250		\$ 150	\$ 30,300		\$ 70,700
5.9 5.10	OHSW Assembly - Angle / DE	12	Assembly	\$ 250 \$ 1,746		\$ 150 \$ 2,274	\$ 8,400 \$ 27,288	\$ 400 \$ 4,020	\$ 22,400 \$ 48,242
5.10	OPGW Splice Boxes OPGW Splice & Test	12	Set EA	\$ 1,746		\$ 2,274	\$ 27,288	\$ 4,020	\$ 48,242
5.11	Spacer - Conductor	5,414	EA EA	<u> </u>	\$ 30,240				
		1,949	EA EA	<u> </u>		\$ 35			
5.13 5.14	Vibration Dampers - Conductor Shieldwire / ORGW Dampers Misc Fittings	1,949	EA EA		\$ 68,215				
5.14	Shieldwire / OPGW Dampers, Misc. Fittings Guys, Anchors, and Accessories	- 657	EA EA	\$ 720		\$ 885	\$ 22,995	\$ 1,605	\$ 40,734
5.15		32.3	Mile	\$ 720		\$ 885	\$ -	\$ 1,605 \$ 1,776	· ·
	Misc. materials (Signs and Markers) LATORS, FITTINGS, HARDWARE:	32.3	iville	ş //U	\$ 24,871 \$ 4,145,919	٦,006	\$ 32,494	<i>ϕ</i> 1,//b	\$ 57,365 \$ 6,276,801
	mission Line Churchtown to Pleasant Valley				\$ 25,512,421		\$ 75,599,187		\$ 101,111,607
6. MOB/DEMO	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS								
6.1	Contractor Mobilization / Demobilization Mob / Demob	1	LS	\$ -	\$ -	\$ 1,011,116	\$ 1,011,116	\$ 1,011,116	\$ 1,011,116
0.1	Project Management, Material Handling & Amenities	1	LJ	-	-	1,011,110	1,011,110 ب	γ 1,011,110	, 1,011,116
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 5,017,411	\$ 5,017,411	\$ 5,017,411	\$ 5,017,411

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 1,011,116	\$ 1,011,116	\$ 1,011,116	\$ 1,011,116
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 5,055,580	\$ 5,055,580	\$ 5,055,580	\$ 5,055,580
6.6	Lidar	1	LS	\$ -	\$ -	\$ 303,335	\$ 303,335	\$ 303,335	\$ 303,335
6.7	Geotech	33.0	Location	\$ -	\$ -	\$ 3,500	\$ 115,500	\$ 3,500	\$ 115,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 707,781	\$ 707,781	\$ 707,781	\$ 707,781
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 303,335	\$ 303,335	\$ 303,335	\$ 303,335
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 5,782,000	\$ 5,782,000	\$ 5,782,000	\$ 5,782,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 2,040,994	\$ 2,040,994	\$ -	\$ -	\$ 2,040,994	\$ 2,040,994
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 101,112	\$ 101,112	\$ 101,112	\$ 101,112
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 2,040,994		\$ 20,459,402		\$ 22,500,395

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NG & NY Transco - T019 - (Segment B)

C. Blue Stores Junction to Blue Stores Substation

Estimate Revision: 5 Total: \$ 5,690,096

NG & NY Transco - T019 - (Segmen	it B)				
	Supply			Installation	Total
C. Blue Stores Junction to Blue Stores Substation					
1. CLEARING & ACCESS	\$	-	\$	1,404,512	\$ 1,404,512
2. FOUNDATIONS	\$	236,848	\$	925,954	\$ 1,162,802
3. STRUCTURES	\$	596,484	\$	946,665	\$ 1,543,149
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	84,763	\$	387,095	\$ 471,858
5. INSULATORS, FITTINGS, HARDWARE	\$	107,544	\$	56,496	\$ 164,040
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	82,051	\$	861,684	\$ 943,735
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$ -
SUBTOTAL:	\$	1,107,690	\$	4,582,406	\$ 5,690,096
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$ -
TOTAL:	\$	1,107,690	\$	4,582,406	\$ 5,690,096

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Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Blue S	tores Junction to Blue Stores Substation								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	4.0	Acre	\$ -	\$ -	\$ 5,000	\$ 20,000	\$ 5,000	\$ 20,000
1.3	Access Road	2,218	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	11,088.0	LF	\$ -	\$ -		\$ 44,352		
1.5	Matting - Access and ROW	8,870	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	1,800.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	2.1	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	2.1	Mile	\$ -	\$ -	\$ 10,000			\$ 21,000
1.9	Work Pads	120,000.0	SF	\$ -	\$ -	\$ 4			
1.10	Restoration for Work Pad areas	24,000.0	SF	\$ -	\$ -	\$ 0.2			\$ 3,600
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	1	EA	\$ -	\$ -	\$ 4,580			
1.14	Maintenance and Protection of Traffic on Public Roads	2	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	-	EA	\$ 750		\$ 1,250		\$ 2,000	
1.17	Concrete Washout Station	-	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
	RING & ACCESS:				\$ -		\$ 1,404,512		\$ 1,404,512
2. FOUNDATIO	ONS								
2.1	Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE	6	EA	\$ 31,225	\$ 187,348	\$ 31,559	\$ 189,354	\$ 62,784	\$ 376,702
2.2	Direct Embed - 115kV Single Circuit H- Pole Tangent	18	EA	\$ 2,750	\$ 49,500	\$ 18,700	\$ 336,600	\$ 21,450	\$ 386,100
2.3	Rock Excavation Adder	200.0	CY	\$ -	\$ -	\$ 2,000	\$ 400,000	\$ 2,000	\$ 400,000
2.4									
2.5									
2.6			<u> </u>						
2.7									
2.8									
2.9									
2.10									
2.11									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.12									
2.13 2.14									
2.14									
TOTAL - FOUN	IDATIONS:				\$ 236,848		\$ 925,954		\$ 1,162,802
3. STRUCTURE									
3.1	115kV Single Circuit H- Pole Angle/ DE	6		\$ 39,822		,	\$ 143,358		
3.2	115kV Single Circuit H- Pole Tangent	18	Structure	\$ 18,515		\$ 11,109	\$ 199,960	\$ 29,624	
3.3	Remove Existing Foundation	-	EA	\$ -	\$ -	\$ 7,500	\$ -	\$ 7,500	\$ -
3.4	Remove Existing Structure and Accessories	27	EA	\$ -	\$ -	\$ 12,500	\$ 337,500	\$ 12,500	\$ 337,500
3.5		-		4 505	4 24.200	Å 5.500	A 255.040	4 6045	4 200 405
3.6	Install Grounding and Grounding Accessories	48	Pole	\$ 506	\$ 24,288	\$ 5,539	\$ 265,848	\$ 6,045	\$ 290,136
3.8									
3.9									
3.10									
3.11									
3.12 3.13									
3.14									
3.15									
TOTAL - STRU					\$ 596,484		\$ 946,665		\$ 1,543,149
	OR, SHIELDWIRE, OPGW						_		
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ -	\$ -	\$ 5.00	\$ -	\$ 5.00	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ -	\$ -	\$ 5.00		\$ 5.00	\$ -
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ -	\$ -	\$ 5.00			
4.4	115kV - (1) 795kcmil 26/7 ACSR "Drake"	34,927.0	LF	\$ 1.72	\$ 60,074	\$ 5.00	\$ 174,635	\$ 6.72	\$ 234,709
4.5	(1) OPGW 36 Fiber AC-33/38/571	11,642.0	LF	\$ 1.35	\$ 15,717	\$ 5.00	\$ 58,210	\$ 6.35	\$ 73,927
4.6	(1) 3/8" EHS7 Steel	11,642.0	LF	\$ 0.47	\$ 5,472	\$ 5.00	\$ 58,210	\$ 5.47	\$ 63,682
4.7	Remove Existing Cable	2.1	Mile	\$ -	\$ -	\$ 30,000	\$ 63,600	\$ 30,000.00	\$ 63,600
4.8	Remove Existing OPGW Cable and Accessories	-	Mile	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$ -
4.9	Remove Existing OHSW and Accessories	2.1	Mile	\$ -	\$ -	\$ 12,000	\$ 25,440	\$ 12,000.00	\$ 25,440
4.10		-							
4.11		-							
4.12	Rider Poles (Locations)	2.0	EA	\$ 1,750	\$ 3,500	\$ 3,500	\$ 7,000	\$ 5,250.00	\$ 10,500
4.13									
	DUCTOR, SHIELDWIRE, OPGW:				\$ 84,763		\$ 387,095		\$ 471,858
5. INSULATOR 5.1	t, FITTINGS, HARDWARE 345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	54	Assembly	\$ 900	\$ 48,600		\$ 19,440	\$ 1,260	\$ 68,040
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -		\$ -	\$ 2,520	\$ -
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	36		\$ 900		\$ 360			
5.5	ODCW Assembly Toward	10	Assembly	ć 200	\$ -	ć 150	\$ -	\$ -	\$ -
5.6 5.7	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	18	Assembly Assembly	\$ 200 \$ 250		\$ 150 \$ 150	\$ 2,700 \$ 1,800	\$ 350 \$ 400	\$ 6,300 \$ 4,800
5.8	OHSW Assembly - Tangent	18	Assembly	\$ 250			\$ 2,700		\$ 6,300
5.9	OHSW Assembly - Angle / DE	12	Assembly	\$ 250	\$ 3,000	\$ 150	\$ 1,800	\$ 400	\$ 4,800
5.10	OPGW Splice Boxes	2		\$ 1,746		\$ 2,274			\$ 8,040
5.11	OPGW Splice & Test	2		\$ 2,520					
5.12	Spacer - Conductor Vibration Dampers - Conductor	72	EA	\$ 50 \$ 35		\$ 35 \$ 35			
5.13 5.14	Shieldwire / OPGW Dampers, Misc. Fittings	25		\$ 35 \$ 27					
5.15	Guys, Anchors, and Accessories	-	EA	\$ 720		\$ 885			
5.16	Misc. materials (Signs and Markers)	2.1	Mile	\$ 770					
5.17									
	LATORS, FITTINGS, HARDWARE:				\$ 107,544		\$ 56,496		\$ 164,040
	Stores Junction to Blue Stores Substation				\$ 1,025,639		\$ 3,720,722		\$ 4,746,361
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								D 10 - 6 (1

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 235,526	\$ 235,526	\$ 235,526	\$ 235,526
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 237,318	\$ 237,318	\$ 237,318	\$ 237,318
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.7	Geotech	2	Location	\$ -	\$ -	\$ 3,500	\$ 7,000	\$ 3,500	\$ 7,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 33,225	\$ 33,225	\$ 33,225	\$ 33,225
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 153,000	\$ 153,000	\$ 153,000	\$ 153,000
6.15	Legal Fees	-	LS	\$ -	\$ -		\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 82,051	\$ 82,051	\$ -	\$ -	\$ 82,051	\$ 82,051
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 4,746	\$ 4,746	\$ 4,746	\$ 4,746
TOTAL - MOE	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 82,051		\$ 861,684		\$ 943,735

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NG & NY Transco - T019 - (Segment B)

D. Knickerbocker 345kV Substation - Install

Estimate Revision: 5 Total: \$ 32,913,517

NG & NY Transco - To	NG & NY Transco - T019 - (Segment B)										
		Supply		Installation		Total					
D. Knickerbocker 345kV Substation - Install											
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	339,050	\$	4,006,475	\$	4,345,525					
2. SUBSTATION FOUNDATIONS	\$	1,920,103	\$	2,065,950	\$	3,986,053					
3. SUBSTATION STRUCTURES	\$	912,975	\$	912,975	\$	1,825,950					
4. MAJOR EQUIPTMENT	\$	7,100,000	\$	940,000	\$	8,040,000					
5. SMALL EQUIPTMENT / MATERIALS	\$	1,206,500	\$	534,500	\$	1,741,000					
6. CONTROL HOUSE / PANELS	\$	2,098,800	\$	1,355,800	\$	3,454,600					
7. MISC ITEMS	\$	1,012,063	\$	1,901,070	\$	2,913,133					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,167,159	\$	5,440,097	\$	6,607,256					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$		\$	-					
SUBTOTAL:	\$	15,756,650	\$	17,156,867	\$	32,913,517					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	\$	15,756,650	\$	17,156,867	\$	32,913,517					

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	Material Supply Cost	Labor & Equipment Supply Rate			TOTAL
D. Knicke	erbocker 345kV Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	9.125	ACRES	\$ -	\$ -	\$ 355,000	\$ 3,239,375	\$ 355,000	\$ 3,239,375
1.2	Station stone within substation fence.	3,900	CY	\$ 2	7 \$ 105,300	\$ 75	\$ 292,500	\$ 102	\$ 397,800
1.3	Substation Fence	2,100	LF	\$ 10	\$ 210,000	\$ 100	\$ 210,000	\$ 200	\$ 420,000
1.4									
1.5									
1.6	Permanent Access Road - 20'-Wide	600	LF	\$ 3	\$ 21,000	\$ 285	\$ 171,000	\$ 320	\$ 192,000
1.7	Pavement	1,600	SY	\$ -	\$ -	\$ 55	\$ 88,000	\$ 55	\$ 88,000
1.8	Gates	1	EA	\$ 2,00	2,000	\$ 2,500	\$ 2,500	\$ 4,500	\$ 4,500
1.9	Culverts / Misc. Access	1	EA	\$ 75	5 5 750	\$ 1,250	\$ 1,250	\$ 2,000	\$ 2,000
1.10	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ 339,050		\$ 4,006,475		\$ 4,345,525
2. SUBSTATION	FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	3	EA	\$ 14,94	\$ 44,820	\$ 16,000	\$ 48,000	\$ 30,940	\$ 92,820
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,02	1 1	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 26,14	\$ 104,580	\$ 28,000	\$ 112,000	\$ 54,145	\$ 216,580
2.1d	Caisson DE Foundations (for DE A frame str shared column)	18	EA	\$ 26,14	\$ 470,610	\$ 28,000	\$ 504,000	\$ 54,145	\$ 974,610
2.1e	Switch Stand Foundations	90	EA	\$ 4,48	2 \$ 403,380	\$ 4,800	\$ 432,000	\$ 9,282	\$ 835,380
2.1f	Station Service Transformer Stand Foundation	4	EA	\$ 4,48	2 \$ 17,928	\$ 4,800	\$ 19,200	\$ 9,282	\$ 37,128
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	72	EA	\$ 4,48	2 \$ 322,704	\$ 4,800	\$ 345,600	\$ 9,282	\$ 668,304
2.1j	Instrument Transformer Stand Foundations	27	EA	\$ 4,48	2 \$ 121,014	\$ 4,800	\$ 129,600	\$ 9,282	\$ 250,614
2.1k	Arrester Stand Foundations	9	EA	\$ 4,48		\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1m	Wave Trap Stand Foundations	3	EA	\$ 4,48		\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1n	Reactor Foundations	0	EA	\$ 7,47) \$ -	\$ 8,000	\$ -	\$ 15,470	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1p	Series Compensation System	1	EA	\$ 112,050	\$ 112,050	\$ 120,000	\$ 120,000	\$ 232,050	\$ 232,050
2.1q									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$ 16,434	\$ 131,472	\$ 17,600	\$ 140,800	\$ 34,034	\$ 272,272
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3j	Instrument Transformer Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3k	Arrester Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 41,832	\$ 41,832	\$ 44,800	\$ 44,800	\$ 86,632	\$ 86,632
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
2.5c	Station Service Distribution Line - 3ph.	1	LS	\$ -	\$ -	\$ 9,750	\$ 9,750	\$ 9,750	\$ 9,750
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	5	EA	\$ 5,229	\$ 26,145	\$ 5,600	\$ 28,000	\$ 10,829	\$ 54,145
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SURS	TATION FOUNDATIONS				\$ 1,920,103		\$ 2,065,950		\$ 3,986,053
	IN STRUCTURES				7 1,520,103		2,003,950		9 3,300,033
3.1	345kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1a	Substation A-Frame Structures - Stand alone	1	EA	\$ 37,000	\$ 37,000	\$ 37,000	\$ 37,000	\$ 74,000	\$ 74,000
3.1b	Substation A-Frame Structures - Shared Column	6	EA	\$ 37,000	\$ 222,000	\$ 37,000	\$ 222,000	\$ 74,000	\$ 444,000
3.1c	Switch Stands	15	EA	\$ 14,800	\$ 222,000	\$ 14,800	\$ 222,000	\$ 29,600	\$ 444,000
3.1d	Station Service Transformer Stand	3	EA	\$ 14,800	\$ 44,400	\$ 14,800	\$ 44,400	\$ 29,600	\$ 88,800
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	72	EA	\$ 3,700	\$ 266,400	\$ 3,700	\$ 266,400	\$ 7,400	\$ 532,800
3.1g	Instrument Transformer Stand	27	EA	\$ 1,850	\$ 49,950	\$ 1,850	\$ 49,950	\$ 3,700	\$ 99,900
3.1h	Arrester Stand	9	EA	\$ 1,850	\$ 16,650	\$ 1,850	\$ 16,650	\$ 3,700	\$ 33,300
3.1j	Wave Trap Stand	3	EA	\$ 7,400	\$ 22,200	\$ 7,400	\$ 22,200	\$ 14,800	\$ 44,400
3.1k	Lightning Mast - 70'	5	EA	\$ 6,475	\$ 32,375	\$ 6,475	\$ 32,375	\$ 12,950	\$ 64,750
					·				
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2c	Switch Stands	0	EA	\$ 12,025	\$ -	\$ 12,025	\$ -	\$ 24,050	\$ -
3.2d	Station Service Transformer Stand	0	EA	\$ 12,025	\$ -	\$ 12,025	\$ -	\$ 24,050	\$ -
3.2e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2f	Bus Support 1 Ph	0	EA	\$ 2,775	\$ -	\$ 2,775		\$ 5,550	\$ -
3.2g	Instrument Transformer Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$ -
3.2h	Arrester Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$ -
3.2j	Wave Trap Stand	0	EA	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
5.2.0	- Innocessaria		271	ψ 0,173	Ť	φ 0,173	¥	Ų 12,550	<u> </u>
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955		\$ 15,910	
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -	\$ 7,955		\$ 15,910	
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.38	IMISC. Structures	-	LA.	3 0,473	,	3 0,473	, -	3 12,930	
TOTAL - SUBS	TATION STRUCTURES				\$ 912,975		\$ 912.975		\$ 1.825.950
4. MAJOR EQI					\$ 912,975		\$ 912,975		\$ 1,825,950
4.1 WAJOK EQ	345kV								
4.1a	Circuit Breakers	3	EA	\$ 200,000	\$ 600,000	\$ 80,000	\$ 240,000	\$ 280,000	\$ 840,000
		0	EA						
4.1b	Capacitor Banks with Reactors	U	EA	Ş -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	Series Compensation System	1	EA	\$ 6,500,000	\$ 6,500,000	\$ 700,000	\$ 700,000	\$ 7,200,000	\$ 7,200,000
4.1d									
4.1e									
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000		\$ 80,000	\$ -
	TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE TO THE TOPPE			<u>'</u>		. 23,000		. 23,000	·
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
	<u> </u>			1	1.	1 22,300		,	Page 14 of 61

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAJO	R EQUIPTMENT				\$ 7,100,000		\$ 940,000		\$ 8,040,000
5. SMALL EQU	IPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	6	EA	\$ 40,000	\$ 240,000	\$ 15,000	\$ 90,000	\$ 55,000	\$ 330,000
5.1b	Disconnect Switches - 3ph w/ manual operator	6	EA	\$ 35,000	\$ 210,000	\$ 17,500	\$ 105,000	\$ 52,500	\$ 315,000
5.1c	VT'S	9	EA	\$ 25,000	\$ 225,000	\$ 12,000	\$ 108,000	\$ 37,000	\$ 333,000
5.1d	CT'S	9	EA	\$ 13,000	\$ 117,000	\$ 8,000	\$ 72,000	\$ 21,000	\$ 189,000
5.1e	CCVT'S	9	EA	\$ 13,000	\$ 117,000	\$ 8,000	\$ 72,000	\$ 21,000	\$ 189,000
5.1f	Arresters	9	EA	\$ 6,500	\$ 58,500	\$ 1,500	\$ 13,500	\$ 8,000	\$ 72,000
5.1g	Wave Traps	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$ 250,000
			<u> </u>						
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
5.3c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.3d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.3e	CCVT'S	0	EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$ -
5.3f	Arresters	0	EA	\$ 3,420	\$ -	\$ 6,000	\$ -	\$ 9,420	\$ -
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ 1,206,500		\$ 534,500		\$ 1,741,000
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ 468,000	\$ 468,000	\$ 95,000	\$ 95,000	\$ 563,000	\$ 563,000
6.2	Protection and Telecom Equipment Panels	20	EA	\$ 35,000	\$ 700,000	\$ 10,000	\$ 200,000	\$ 45,000	\$ 900,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,000
6.4	Control Cables	1	LS	\$ 415,800	\$ 415,800	\$ 415,800			
6.5	SCADA and Communications	1	EA	\$ 50,000	\$ 50,000	\$ 100,000			
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000		\$ 300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000				\$ 300,000
6.8	Security	1	EA	\$ 7,500	,		· ·		
6.9	Fire Alarm	1	EA	\$ 7,500					
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Item	Item Description	Estimated Quantity	Unit of Measure	Materi	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.10	Generator	1	EA	Ś	100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
0.10	Generator	1	LA	7	100,000	3 100,000	3 80,000	\$ 80,000	3 180,000	3 180,000
TOTAL - CONTI	ROL HOUSE / PANELS / GENERATOR					\$ 2,098,800		\$ 1,355,800		\$ 3,454,600
7. MISC ITEMS						, ,,,,,,,,		, ,,,,,,,,		, ,,,,,,
7.1	Conduit & Cable Trench System	1,050.0	LF	\$	185.00	\$ 194,250	\$ 170.00	\$ 178,500	\$ 355	\$ 372,75
7.2	Rigid Bus, Fittings & Insulators	1,900.0	LF	\$	125.07	\$ 237,633	\$ 237.10	\$ 450,490	\$ 362	\$ 688,12
7.3	Strain Bus, Connectors & Insulators	0.0	LF	\$	39.30	\$ -	\$ 53.35	\$ -	\$ 93	\$ -
7.4	Grounding System	26,000.0	LF	\$	6.93	\$ 180,180	\$ 32.58	\$ 847,080	\$ 40	\$ 1,027,26
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$ -
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$ -
7.7	Strain Bus Insulators - 115kV	0	EA	\$	1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$ -
7.8	Low Voltage AC Station Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$ 125,000
7.9	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$ 90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$ 250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$ 360,000
7.12										
7.13										
7.14										
7.15										
7.16										
7.17										
7.18										
7.19										
7.20										
7.21										
7.22										
7.23										
7.24										
7.25										
TOTAL - MISC	ITEMS					\$ 1,012,063		\$ 1,901,070		\$ 2,913,13
D. Knicke	erbocker 345kV Substation - Install					\$ 14,589,491		\$ 11,716,770		\$ 26,306,26
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					, ,,,,,		, , ,		,,.
	Contractor Mobilization / Demobilization									
8.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 263,063	\$ 263,063	\$ 263,063	\$ 263,06
	Project Management, Material Handling & Amenities			<u> </u>			,			
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 1,305,382	\$ 1,305,382	\$ 1,305,382	\$ 1,305,38
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 263,063	\$ 263,063	\$ 263,063	\$ 263,06
	Site Accommodation, Facilities, Storage	1	LS	Ś	-	\$ -	\$ 263,063	\$ 263,063	\$ 263,063	\$ 263,06
	Engineering	-		1		· ·	- 203,003	- 203,003	- 203,003	- 203,000
	Design Engineering	1	LS	\$	-	\$ -	\$ 2,104,501	\$ 2,104,501	\$ 2,104,501	\$ 2,104,50
-	LiDAR	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	4	EA	\$		\$ -	\$ 3,500			
	Surveying/Staking	1	Site	\$		\$ -	\$ 184,144	\$ 184,144		
	Testing & Commissioning			† ·						
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 657,657	\$ 657,657	\$ 657,657	\$ 657,65
3.3	Permitting and Additional Costs	-		1		·	- 057,057	+ 057,057	557,057	- 057,05
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
0.10				1 *		· ·	· ·	T	T	D 16 -64

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Co	st	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.11	Environmental Mitigation		LS	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -		\$ 78,919	\$ 78,919	\$ 78,919	\$ 78,919
8.13	Real Estate Costs (New)	1	LS	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$ -		\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000
8.15	Legal Fees		LS	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	•	LS	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -
8.17			LS	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 1,167,159	\$ 1,167,1	59 5	\$ -	\$ -	\$ 1,167,159	\$ 1,167,159
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	,	\$ 26,306	\$ 26,306	\$ 26,306	\$ 26,306
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,167,1	59		\$ 5,440,097		\$ 6,607,256

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D. SS Knickerbocker - Install

NG & NY Transco - T019 - (Segment B) Total: \$ 71,152

NG & NY Transco - T019 -	NG & NY Transco - T019 - (Segment B)										
	Supply	Supply Installation			Total						
E. Greenbush Substation - Removal											
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	\$	-	\$	-						
2. SUBSTATION FOUNDATIONS	\$.	\$	12,000	\$	12,000						
3. SUBSTATION STRUCTURES	\$	\$	-	\$	-						
4. MAJOR EQUIPTMENT	\$	\$	7,000	\$	7,000						
5. SMALL EQUIPTMENT / MATERIALS	\$	\$	35,000	\$	35,000						
6. CONTROL HOUSE / PANELS	\$.	\$	7,200	\$	7,200						
7. MISC ITEMS	\$.	\$	-	\$	-						
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$.	\$	9,952	\$	9,952						
CONTRACTOR MARK-UP (OH&P)	\$.	\$	-	\$	-						
SUBTOTAL:	\$	\$	71,152	\$	71,152						
CONTINGENCY ON ENTIRE PROJECT	\$	\$	-	\$	-						
TOTAL:	\$.	\$	71,152	\$	71,152						

escrip	otion of	·W	or	k:
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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
E. Green	bush Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
	Site Works including clearing, sediment controls, rough grading, and final grading.		ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.		CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence		LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 14,200	\$ -	\$ 14,200	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Reactor Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
·									
2.2	230kV								
	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000		\$ 22,000	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ 11,000		\$ 11,000	
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -		\$ -		\$ -
			!	1 *					Dog 19 of 61

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -		\$ -
	Bus Support 1 Ph Foundations	0		\$ -	\$ -		\$ -	\$ 2,400	
	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
	Arrester Stand Foundations	0		\$ -	\$ -			\$ 2,400	
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 7,200	\$ 7,200	\$ 7,200	\$ 7,200
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
	Fuse Stand Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Instrument Transformer Stand Foundations	2		\$ -	\$ -	\$ 2,400	\$ 4,800	\$ 2,400	
	Arrester Stand Foundations	0		\$ -	\$ -	\$ -	\$ -		\$ -
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	•	\$ -
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transforman Formulations								
	Transformer Foundations	0	EA.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	345-230kV Transformer Foundation w/ Oil Containment 345-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -		-	•	•
	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000 \$ -	\$ -	\$ 42,000 \$ -	\$ -
2.4u	113KV-09KV Transformer Foundation wy Oil Containment	0	EA	-	-	-	, -	· -	-
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
					4				
	TATION FOUNDATIONS				\$ -		\$ 12,000		\$ 12,000
3. SUBSTATION									
	345kV					<u> </u>		A	<u> </u>
	Substation A-Frame Structures - Stand alone	0		\$ -	\$ - \$ -	\$ -	\$ -	•	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	т	\$ -	\$ -	\$ -	\$ -
	Switch Stands Station Service Transformer Stand	0		\$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ - \$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ 2,250			\$ -
	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ 2,230	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Misc. Structures	0		\$ -	\$ -	\$ -	\$ -		\$ -
3.2	230kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
	Switch Stands	0		\$ -	\$ -			\$ 9,750	
	Station Service Transformer Stand	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 1 Ph	0		\$ -		\$ 2,250		\$ 2,250	
	Instrument Transformer Stand	0		\$ -	\$ -			\$ 1,050	
	Arrester Stand	0		\$ -	\$ -	\$ 1,050		\$ 1,050	
3.2j	Wave Trap Stand	0		\$ -		\$ 4,500		\$ 4,500	
	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stands	0		\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
	Fuse Stand	0			\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand	0			\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0			\$ -		\$ -	\$ -	\$ -
	Wave Trap Stand	0			\$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	TATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQUI					J.		,		y
	345kV								
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0			\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
	230kV								
	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
	115kV								
	Circuit Breakers	1	EA	\$ -	\$ -	\$ 7,000	\$ 7,000	\$ 7,000	
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	OR EQUIPTMENT				\$ -		\$ 7,000		\$ 7,000
	IPTMENT / MATERIALS								
	345kV				·				
	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	VT'S	0			\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S CCVT'S	0			\$ -		\$ -	\$ -	\$ -
		0			\$ - \$ -	\$ 2,500 \$ 1.500	\$ - \$ -	\$ 2,500 \$ 1,500	\$ - \$ -
	Arresters Wave Traps	0			\$ -	\$ 1,500 \$ 2,500	<u>'</u>	\$ 1,500 \$ 2,500	<u>'</u>
	Station Service Transformers	0		\$ -	\$ -	\$ 2,300	\$ -	\$ 2,300	\$ -
3.111	Station Service Hanstormers		EA.	7	,	7	7	7	7
5.2	230kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0			\$ -	\$ 5,500		\$ 5,500	
	VT'S	0			\$ -	\$ -	\$ -	\$ -	\$
	CT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CCVT'S	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
	Arresters	0		\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Wave Traps	0		\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV	-	F.*	ć	ć	Ć.	ć	ć	^
	Line Switches - 3ph w/ motor operator	0			\$ -	\$ -	\$ -	\$ -	\$ -
	Disconnect Switches - 3ph w/ manual operator	0			\$ -	\$ 5,500 \$ -		\$ 5,500	
	VT'S	0			\$ -		\$ - \$ -	\$ - \$ -	\$ -
	CCYT'S	0 2			\$ - \$ -	\$ - \$ 17,500		\$ - \$ 17,500	\$ - \$ 35,000
	Arresters	0			\$ -	\$ 17,500		\$ 17,500	· · · · · · · · · · · · · · · · · · ·
	Wave Traps	0			\$ -		\$ -	\$ 1,500	\$ -
	Station Service Transformers	0			\$ -		\$ -		\$ -
اال.ر	Station Service Transformers	-			¥	¥ 1	¥ -	¥ 3	· ·
TOTAL - SMAII	L EQUIPTMENT / MATERIALS				\$ -		\$ 35,000		\$ 35,000

S	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1 23100C Statistics	6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.4 Control Cable	6.2	Protection and Telecom Equipment Panels	2	EA	\$ -	\$ -	\$ 3,600	\$ 7,200	\$ 3,600	\$ 7,200
SCADA And Communications						т		·	<u> </u>	
6.4 Low Voltage AC Distribution 1					'					
6.7 C. Chartenacon yearem 0 EA 5 5 5 5 5 5 5 5 5					· ·	<u>'</u>			т	•
Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secretary Secr						Ÿ		7	т	Ŷ
6.3 Fine Alamon										
Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Sect						Ÿ			•	
Total-Control House / Pawers / Generation					·	Ÿ	•		т	•
7.1 Conduit & Cable Trench System	0.10	Cenerator	0	LA.	,	7	,	,	7	7
7.00 Control & Cabbo Trench System	TOTAL - CONTR	OL HOUSE / PANELS / GENERATOR				\$ -		\$ 7,200		\$ 7,200
Total Rigid Bus, Pittings Rivolators 0 EA S S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75 S 126.75								, , , ,		
7.3 Strain Buy, Connection & Insulators 0 15 5 5 5 2,10000 5 5 2,1000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,00	7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -		
2.4 Grounding System	7.2	Rigid Bus, Fittings & Insulators	0	EA	\$ -	\$ -	\$ 126.25	\$ -	\$ 126	\$ -
7.5	7.3	Strain Bus, Connectors & Insulators	0	LS	\$ -	\$ -	\$ 21,000.00	\$ -	\$ 21,000	\$ -
7.6		Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.7										
7.8										
7.10										
7.10										
7.11										
7.12										
7.13										
T14										
TOTAL - MISCITEMS										
S										
S		TEMS				\$ -		\$ -		\$ -
S.MOR/DEMOB. ENGINEERING. PERMITTING, T&C, PM & INDIRECTS:	E Groon	ouch Cubstation Removal								
Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilizati						· -		3 01,200		ÿ 01,200
8.1 Mob / Demob 1 LS S S S S S S S S										
Project Management, Material Handling & Amenities			1	10	ė	ė	¢ 612	¢ 612	¢ 612	¢ 612
R.2 Project Management & Staffing (Includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ (Staff, and Admin Staff) 1			1	LJ	-	· -	3 012	3 012	3 012	3 612
8.2 and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite 1 LS 8.4 Utility PM and Project Oversite 1 LS 8.5 S S S S S S S S S S S S S S S S S S S										
Site Accommodation, Facilities, Storage			1	LS			\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037
Site Accommodation, Facilities, Storage	8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 612	\$ 612	\$ 612	\$ 612
Engineering					\$ -					
8.6 LiDAR									•	
8.7 Geotech - Site -	8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 4,896	\$ 4,896	\$ 4,896	\$ 4,896
8.8	8.6	LiDAR	-	Mile	\$ -	\$ -			\$ -	
Testing & Commissioning Section & Commissioning of T-Line and Equipment Section & Commissioning of T-Line and Equipment Section & Commissioning of T-Line and Equipment Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section			-			\$ -		\$ -		
R.9 Testing & Commissioning of T-Line and Equipment			-	Site	\$ -	\$ -	\$ 428	\$ -	\$ 428	\$ -
Restriction Permitting and Additional Costs Reprint Reprint Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Restriction Re										
8.10 Environmental Licensing & Permitting Costs			-	LS	\$ -	\$ -	\$ 1,530	Ş -	\$ 1,530	ş -
8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -									*	
8.12 Warranties/LOC's 1 LS \$ - \$ - \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 \$ 184 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>										
8.13 Real Estate Costs (New) 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$						т			т	
8.14 Real Estate Costs (Incumbent Utility) 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ </td <td></td> <td></td> <td></td> <td></td> <td><u> </u></td> <td>· ·</td> <td></td> <td></td> <td>-</td> <td></td>					<u> </u>	· ·			-	
8.15 Legal Fees - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						•			•	
8.16 Allowance for Funds Used During Construction (AFUDC) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						т			т	
8.17 - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td></td> <td></td> <td></td> <td>·</td> <td>-</td> <td></td> <td></td> <td>·</td> <td></td>					·	-			·	
8.18 Sales Tax on Materials 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -		Anomalice for Funds osed burning construction (All obe)							<u> </u>	
8.19 Fees for permits, including roadway, railroad, building or other local permits - LS \$ - \$ 61 \$ -		Sales Tax on Materials				•			•	
					ļ -				<u> </u>	
						\$ -	. 01	\$ 9,952	. 01	\$ 9,952

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NG & NY Transco - T019 - (Segment B) F. Schodack Substation - Install

stimate levision:	5	(008	Total:	\$ 2,579,857	
	NG & NY Transco -	T019 - (Segme	nt B)		
			Supply	Installation	Total
	F. Schodack Substation - Install				
	1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	4,050	\$ 11,250	\$ 15,3
	2. SUBSTATION FOUNDATIONS	\$	201,690	\$ 216,000	\$ 417,6
	3. SUBSTATION STRUCTURES	\$	60,680	\$ 60,680	\$ 121,
	4. MAJOR EQUIPTMENT	\$	104,000	\$ 120,000	\$ 224,
	5. SMALL EQUIPTMENT / MATERIALS	\$	316,520	\$ 226,000	\$ 542,
	6. CONTROL HOUSE / PANELS	\$	192,815	\$ 147,815	\$ 340,
	7. MISC ITEMS	\$	168,552	\$ 259,305	\$ 427,
	8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	83,865	\$ 406,636	\$ 490
	CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$
	SUBTOTAL:	\$	1,132,172	\$ 1,447,686	\$ 2,579,
	CONTINGENCY ON ENTIRE PROJECT	\$		\$ -	\$ -
	TOTAL:	\$	1,132,172	\$ 1,447,686	\$ 2,579,

)es	crip	tion	of '	W	or	k:
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Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
F. Schod	ack Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -		\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	150	CY	\$ 27	\$ 4,050	\$ 75	\$ 11,250	\$ 102	\$ 15,300
1.3	Substation Fence	0	LF	\$ 100	\$ -	\$ 100	\$ -	\$ 200	\$ -
1.4	Permanent Access Road - 20'-Wide	0	LF	\$ 35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ 4,050		\$ 11,250		\$ 15,300
	NFOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ 14,940	\$ -		\$ -	\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145		\$ 28,000		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145		\$ 28,000		\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,482	\$ -	,	\$ -	\$ 9,282	
2.1g	Bus Support 3ph Foundations	0	EA	\$ -		\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,482	\$ -		\$ -	\$ 9,282	
2.1k	Arrester Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	
2.1m	Wave Trap Stand Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	
2.1n	Reactor Foundations	0	EA	\$ 7,470	\$ -	\$ 8,000	\$ -	\$ 15,470	\$ -
2.1p									
				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV			44.050	<u> </u>	42.000		A 24.752	
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952		\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820		\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410		\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,735		, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	2	EA	\$ 5,229	\$ 10,458	\$ 5,600	\$ 11,200	\$ 10,829	\$ 21,658
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$ 16,434	\$ 131,472	\$ 17,600	\$ 140,800	\$ 34,034	\$ 272,272
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3g	Bus Support 3ph Foundations	4	EA	\$ 2,988	\$ 11,952		\$ 12,800		\$ 24,752
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3j 2.3k	Instrument Transformer Stand Foundations Arrester Stand Foundations	6	EA EA	\$ 2,988 \$ 2,988	\$ 17,928 \$ 17,928		\$ 19,200 \$ 19,200	\$ 6,188 \$ 6,188	\$ 37,128 \$ 37,128
2.3K 2.3m	Wave Trap Stand Foundations	4	EA EA	\$ 2,988	\$ 17,928		\$ 19,200		\$ 37,128
2.3m 2.3n	Station Service Foundations	0	EA EA	\$ 2,988	\$ 11,952	\$ 3,200	\$ 12,800	\$ 6,188	\$ 24,752
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	•	\$ -
									·
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	•
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -	\$ 81,600	\$ -	\$ 157,794	\$ -
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.5									
2.6a	Lightning Mast Foundations 70' Lightning Mast Foundation	0	ΓΛ	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b	60' Lightning Mast Foundation	0	EA EA	\$ 5,229	\$ -	\$ 5,600 \$ -	\$ - \$ -	\$ 10,829	\$ -
2.6c	50' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				<u>-</u>	- T	7	7	7	*
	TATION FOUNDATIONS				\$ 201,690		\$ 216,000		\$ 417,690
	N STRUCTURES								
3.1	345kV	0	- FA	ć 27.000	Ć	ć 27.000	ć	ć 74.000	^
3.1a	Substation A-Frame Structures - Stand alone	0	EA EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000 \$ 74,000	•
3.1b 3.1c	Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ 37,000 \$ 14,800	\$ - \$ -	\$ 37,000 \$ 14,800	\$ - \$ -	\$ 74,000	•
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -		\$ -	\$ 7,400	
3.1g	Instrument Transformer Stand	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
3.1h	Arrester Stand	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
3.1j	Wave Trap Stand	0	EA	\$ 7,400	\$ -	\$ 7,400	\$ -	\$ 14,800	\$ -
3.1k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2 3.2a	230kV Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	
3.2c	Switch Stands	0	EA	\$ 12,025	\$ -		\$ -	\$ 24,050	
3.2d	Station Service Transformer Stand	0	EA	\$ 12,025	\$ -	\$ 12,025		\$ 24,050	
	Bus Support 3ph	0	EA	1	\$ -			\$ -	
	Bus Support 1 Ph	0	EA	\$ 2,775				\$ 5,550	
3.2g	Instrument Transformer Stand	0	EA	\$ 1,295				\$ 2,590	
3.2h	Arrester Stand	0	EA	\$ 1,295				\$ 2,590	•
	Wave Trap Stand	0	EA	\$ 5,550	\$ -			\$ 11,100	
3.2j		۱ ۸	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2j 3.2k	Misc. Structures	0	EA	3 0,473	<u> </u>	φ 0,3	•	+,	•
3.2k		0	EA	5 0,473	*	φ σ,πσ			
	Misc. Structures 115kV Substation A-Frame Structures - Stand alone	2	EA	\$ 18,500					

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3c	Switch Stands	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$	3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	4	EA	\$	1,850	\$ 7,400	\$ 1,850	\$ 7,400	\$ 3,700	\$ 14,800
3.3g	Instrument Transformer Stand	6	EA	\$	740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$ 8,880
3.3h	Arrester Stand	6	EA	\$	740	\$ 4,440	\$ 740	\$ 4,440	\$ 1,480	\$ 8,880
3.3j	Wave Trap Stand	2	EA	\$	3,700	\$ 7,400	\$ 3,700	\$ 7,400	\$ 7,400	\$ 14,800
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TATION STRUCTURES					\$ 60,680		\$ 60,680		\$ 121,360
4. MAJOR EQU										
4.1	345kV									
4.1a	Circuit Breakers	0	EA	\$	300,000	\$ -	\$ 80,000	\$ -	\$ 380,000	\$ -
4.1b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV									
4.2a	Circuit Breakers	0	EA	\$	250,000	\$ -	\$ 80,000	\$ -	\$ 330,000	\$ -
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -		\$ -
				T .		•			. 22,230	
4.3	115kV									
4.3a	Circuit Breakers	2	EA	\$	52,000	\$ 104,000	\$ 60,000	\$ 120,000	\$ 112,000	\$ 224,000
4.3b	Capacitor Banks	0	EA	\$	-		\$ 60,000	\$ -		\$ -
4.50	Capacitor Banks	-	LA	7	_	, -	ý 00,000	· -	3 00,000	-
TOTAL - MAIC	DR EQUIPTMENT					\$ 104,000		\$ 120,000		\$ 224,000
	IIPTMENT / MATERIALS					\$ 104,000		\$ 120,000		\$ 224,000
5.1	345kV	2	E4	ć	40.000	ć	ć 45.000	ć.	ć 55.000	^
5.1a	Line Switches - 3ph w/ motor operator	0		\$	40,000		\$ 15,000			\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$,	т	\$ 17,500	\$ -	, , , , , , , ,	\$ -
5.1c	VT'S	0	EA	\$	25,000		\$ 12,000	\$ -		\$ -
5.1d	CT'S	0	EA	\$	13,000		\$ 8,000		\$ 21,000	•
5.1e	CCVT'S	0	EA	\$		т	\$ 8,000	\$ -		\$ -
5.1f	Arresters	0	EA	\$	-,		\$ 1,500	\$ -		\$ -
5.1g	Wave Traps	0	EA	\$	13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
5.1h	Station Service Transformers	0	EA	\$	200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$	35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$	10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$	5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
				T .						
5.3	115kV									
5.3a	Line Switches - 3ph w/ motor operator	2	EA	\$	33,000	\$ 66,000	\$ 15,000	\$ 30,000	\$ 48,000	\$ 96,000
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	28,000		\$ 17,500	\$ -	,	\$ -
5.3c	VT'S	6	EA	\$	13,000		\$ 8,000	\$ 48,000		\$ 126,000
5.3d	CT'S	6	EA	\$	13,000	. ,	\$ 8,000	\$ 48,000	, , , , , , ,	\$ 126,000
	CCVT'S	6	EA		8,000			. ,		
5 20				\$						
5.3e		6		\$	3,420					
5.3f	Arresters	2		\$	13,000		\$ 8,000	\$ 16,000	\$ 21,000	\$ 42,000
5.3f 5.3g	Wave Traps	2				,	ć	,	ć	ć
5.3f 5.3g 5.3h	Wave Traps Station Service Transformers	0	EA	\$			·			\$ -
5.3f 5.3g	Wave Traps		EA				\$ - \$ -			\$ - \$ -
5.3f 5.3g 5.3h 5.3j	Wave Traps Station Service Transformers Fuses	0	EA	\$		\$ -		\$ -	\$ -	\$ -
5.3f 5.3g 5.3h 5.3j	Wave Traps Station Service Transformers Fuses L EQUIPTMENT / MATERIALS	0	EA	\$					\$ -	
5.3f 5.3g 5.3h 5.3j	Wave Traps Station Service Transformers Fuses	0	EA	\$		\$ -		\$ -	\$ -	\$ -
5.3f 5.3g 5.3h 5.3j	Wave Traps Station Service Transformers Fuses L EQUIPTMENT / MATERIALS	0	EA	\$		\$ -		\$ -	\$ -	\$ - \$ 542,520

5.00 SOUR AND Communications 0 10 10 10 10 10 10 10	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
Description of Communication Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description Description	6.3	125VDC Batteries	0	EA	\$ 75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
6 Lev Ostope Collection		Control Cables	1	LS	\$ 122,815	\$ 122,815	\$ 122,815	\$ 122,815	\$ 245,630	\$ 245,630
6.7 C Desidurion System 9	6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
B Secure	6.6	Low Voltage AC Distribution	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
G.S. Fire Airmin		-				\$ -			· · · · · · · · · · · · · · · · · · ·	
Control Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system) Control Conduction Process (as a control system									· · · · · · · · · · · · · · · · · · ·	·
Total Control House / Parkets / Generation										•
FAMOR TRANS	6.10	Generator	0	EA	\$ 100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
7.4 Control & Carbon February System	TOTAL CONT	POLICIES / DANIELS / GENERATOR				ć 102.91F		ć 147.01F		\$ 340,630
7.1 Combact & Cabel French System \$10 \$1 \$1 \$10 \$1 \$1 \$1		NOL HOUSE / PAINELS / GENERATOR				\$ 192,815		\$ 147,815		\$ 340,030
Page Bage flar Fitting & Franciscon D E S S S S S S S S S		Conduit & Cable Transh System	E20	10	¢ 195.00	¢ 00.0E0	¢ 170.00	¢ 00.100	ć occ	\$ 188,150
73 Serian Bus, Connection & Institutions 74 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,100 5 1,										
24 Grounding System					+'	т		-		
27 Strain Rus Insulations - 3494V										
2.5 Strain But Insulations - 2200V 0 EA 1.400 5 . 5 . 750 5 . 5 . 1,100 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 .									•	•
24						T				
7.9 SVF service									. ,	
7.9 SSYT Service								-,		
7.10 Control Conduction From Trench to Equipment 1 15 5 14,000 5 70,000 5 70,000 5 84,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 5 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,000 70,00										
7.12 Mic. Materials (Above and Below Ground) 1 15 5 20,712 5 70,000 5 90,712 5 70,000 5 90,712 5 70,000 5 90,712 5 70,000 5 70,000 5 90,712 5 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000 7 70,000						\$ 14,000				
7.12			1	LS	\$ 20,712	\$ 20,712		\$ 70,000		
7.14		,			,				· · · · · · · · · · · · · · · · · · ·	,
7.15	7.13									
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S 168,552 S 259,305 S 259,005 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084 S 2,084	7.19									
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S. MOB/DEMOS, ENCINEERING, FERMITING, TRC., PM. & INDIRECTS:	F. Schoda	ack Substation - Install				\$ 1,048,307		\$ 1,041,050		\$ 2,089,357
Contractor Mobilization Demobilization										
8.1 Mob / Demob										
Project Management, Material Handling & Amenities			1	IS	\$ -	\$ -	\$ 20.894	\$ 20.894	\$ 20.894	\$ 20,894
8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 1			-	20	<u> </u>	, , , , , , , , , , , , , , , , , , ,	20,031	20,03 .	20,031	20,05
Site Accommodation, Facilities, Storage	8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ 103,679	\$ 103,679	\$ 103,679	\$ 103,679
Site Accommodation, Facilities, Storage	8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 20,894	\$ 20,894	\$ 20,894	\$ 20,894
8.5 Design Engineering			1	LS	\$ -	\$ -	\$ 20,894	\$ 20,894	\$ 20,894	\$ 20,894
8.6 LIDAR		Engineering								
Site S Surveying/Staking Site S S S S S S S S S	8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 167,149	\$ 167,149	\$ 167,149	\$ 167,149
Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site	8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Section & Commissioning of T-Line and Equipment						т			<u> </u>	•
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No. Permitting and Additional Costs Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Sect										
8.10 Environmental Licensing & Permitting Costs - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<			1	LS	\$ -	\$ -	\$ 52,234	\$ 52,234	\$ 52,234	\$ 52,234
8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <td< td=""><td></td><td></td><td></td><td></td><td>1.</td><td></td><td></td><td></td><td></td><td></td></td<>					1.					
8.12 Warranties / LOC's 1 LS \$ - \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268 \$ 6,268			-							
8.13 Real Estate Costs (New) 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
8.14 Real Estate Costs (Incumbent Utility) 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
8.15 Legal Fees - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
8.16 Allowance for Funds Used During Construction (AFUDC) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
8.17 - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 83,865 \$ - \$ - \$ 83,865 \$ - \$ - \$ 83,865 \$ - \$ - \$ 83,865 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>										
8.18 Sales Tax on Materials 1 LS \$ 83,865 \$ - \$ - \$ 83,865 \$		Allowance for Funds Used During Construction (AFUDC)								
		Salas Tay on Materials			<u> </u>					
8.19 Fees for permits, including roadway, railroad, building or other local permits LS \$ - \$ - \$ - \$		Fees for permits, including roadway, railroad, building or other local permits	-	LS	63,665 ب					

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	то	DTAL
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 83,865		\$ 406,636		\$	490,500

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F. SS Schodack-Install

NG & NY Transco - T019 - (Segment B) G. Schodack Substation - Removal

Total: \$ 158,349

NG & NY Transco - T019	(Segment l	В)		
		Supply	Installation	Total
G. Schodack Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ 62,400	\$ 62,400
3. SUBSTATION STRUCTURES	\$	-	\$ 73,800	\$ 73,800
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ -	\$ -
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$ -
7. MISC ITEMS	\$	-	\$ -	\$ -
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 22,149
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	-	\$ 136,200	\$ 158,349
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$		\$ 136,200	\$ 158,349

Doccri	iption of	Mor	٠.
Descii	puon o	VVOI	٨.

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
G. Schoo	lack Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 14,200	\$ -	\$ 14,200	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Reactor Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0		\$ -	\$ -	\$ 11,000		\$ 11,000	
	· · · · · · · · · · · · · · · · · · ·			-		,		,	Page 27 of 61

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	•	\$ 2,400	
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400		\$ 2,400	
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -		\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	•	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Steele Transmission Pole Dead Ends (1ph.) Foundations	6	EA	\$ -	\$ -	\$ 10,400	\$ 62,400	\$ 10,400	\$ 62,400
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad				A	A		A	•
2.5a	Control House / Pad	0	EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b	70 Lightning Wast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
TOTAL - SUBST	TATION FOUNDATIONS				-	- T		ş -	
2 CHIECTATIO					\$ -	*	\$ 62,400	*	\$ 62,400
3. 3UDSTATIO	N STRUCTURES				7	*		*	\$ 62,400
3. SUBSTATION	N STRUCTURES 345kV				7		\$ 62,400	*	\$ 62,400
3.1 3.1a	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone	0		\$ -	\$ -	\$ -	\$ 62,400	\$ -	\$ -
3.1 3.1a 3.1b	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ - \$ - \$ -	\$ -	\$ 62,400 \$ - \$ -	\$ - \$ -	\$ - \$ -
3.1 3.1a	N STRUCTURES 345KV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands		EA EA	\$ -	\$ - \$ - \$ -	\$ -	\$ 62,400 \$ - \$ - \$ -	\$ - \$ - \$ -	\$ - \$ - \$ -
3.1 3.1a 3.1b 3.1c 3.1d	N STRUCTURES 345KV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 0 0	EA EA EA	\$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ 62,400 \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ -
3.1 3.1a 3.1b 3.1c 3.1d 3.1e	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph	0 0 0	EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 5 \$ - \$ 5 \$ -	\$ 62,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 5 5 - \$ 2,250	\$ - \$ - \$ - \$ - \$ -
3.1 3.1a 3.1b 3.1c 3.1d 3.1e 3.1f	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph	0 0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 5 5 - \$ - \$ - \$ - \$ -	\$ 62,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ 5
3.1 3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand	0 0 0 0 0	EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ -	\$ 62,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ 5 5 - \$ 5 5 -
3.1 3.1a 3.1b 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h	N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand	0 0 0 0 0 0 0	EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 2,250 \$ - \$ - \$ -	\$ 62,400 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 5 \$ - \$ 2,250 \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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1.2% Mile Structures	Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
BBW	3.2k	Misc. Structures	0	FA	\$ -	\$ -			\$ -	\$ -
3-3-3-3-5 (Sobstation A Frame Struckers—Stand allows) 3-3-5 (Sobstation A Frame Struckers—Stand allows) 3-3-5 (Sobstation A Frame Struckers—Stand allows) 3-3-5 (Sobstation A Frame Struckers—Stand allows) 3-3-5 (Sobstation A Frame Struckers—Stand allows) 3-3-6 (Sobstation A Frame Struckers—Stand allows) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-6 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-7 (Sobstation A Frame Struckers) 3-			-		7	7	7	7	*	*
3.36 Sobolation Arizones Shared Column 0 6A 5 5 5 5 5 5 5 5 5		115kV								
3.26 Switch Stands					•			·	· · · · · · · · · · · · · · · · · · ·	
3.36 Plane Stood 0 FA 5 5 5 5 5 5 5 5 5										\$ -
3.26 Rus Support 3 ph										
33 Box Support 2 PM									·	\$ -
3.3 Instrument Transformer Stand										\$ -
3.3 Avester Stand						<u> </u>				\$ -
3.3 Water Tray Stand 0 EA S S S S S S S S S										\$ -
3.8 Mics. Structures						'		·	•	\$ -
Control Personal Company						·				\$ -
ALL Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service	3.3K	Misc. Structures	ь	EA	\$ -	\$ -	\$ 12,300	\$ 73,800	\$ 12,300	\$ 73,800
ALL Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service Service	TOTAL - SUBST	TATION STRUCTURES				ė		¢ 72.900		\$ 73,800
4.13 SSAV						, -		\$ 75,600		3 73,800
4.10 Corport Breakers 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$										
4.10			n	FA	Š -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c 0 EA S S S S S S S S S						H:			•	\$ -
4.10										\$ -
4.2 2386V				27,	*	*	Ť	<u> </u>	<u> </u>	*
4.20 Circuit Breakers 0 EA 5 5 7,000 5 5		230kV								
A 3			0	EA	\$ -	\$ -	\$ 7.000	\$ -	\$ 7,000	\$ -
4.3 1154V										•
4.3					*	*	, ,,,,,,,	*	,	7
4.3	4.3	115kV								
43			0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
S. SANAL EQUIPMENT MATERIALS S. S. S. S. S.					•	\$ -	-		•	\$ -
S.SMALEQUETMENT / MATERIALS S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV S.1 385kV										
S.1 345kV S.1 In Switches - 3ph w/ motor operator O EA S S S S,500 S S S S S S S S S	TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ -		\$ -
S.1a Line Switches - 3gh w/ manual operator 0 EA S S S S S S S S S	5. SMALL EQUI	PTMENT / MATERIALS								
S.1D Disconnect Switches - 3ph w/ manual operator D	5.1	345kV								
S.1c	5.1a	Line Switches - 3ph w/ motor operator			\$ -	\$ -		\$ -		\$ -
S.1d CTS			0			\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
S.1e CCVTS										\$ -
S.1f Arresters 0 EA S - S - S 1,500 S - S S S S S S S S										\$ -
S.1g Wave Traps								-		
S.1n Station Service Transformers 0 EA \$ - \$ - \$ - \$ \$ \$ \$ \$								· ·		
S.2 230kV						7		-		
5.2a Line Switches - 3ph w/ motor operator 0 EA \$ - \$ 5,500 \$ - \$ 5,500 \$ 5 5,500 \$ - \$ 5,2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ - \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$ 5,500 \$ - \$	5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
S.2a Line Switches - 3ph w/ motor operator										
S.2a Line Switches - 3ph w/ motor operator										
S.2b Disconnect Switches - 3ph w/ manual operator S			0	F.A.	ć	ć	ć 5.500	ć	ć F.500	^
S.2c Vi'S O EA S - S - S - S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S										
5.2d CT'S 0 EA \$ - \$ - \$ - \$ 5 5 5 5 5 5 5 5 5										\$ -
5.2e CCVT'S 0 EA \$ -						-			•	\$ -
5.2f Arresters 0 EA \$ -						т		-		•
S.2g Wave Traps 0 EA \$ - \$ \$ 2,500 \$ - \$ \$ \$ \$ \$ \$ \$ \$										
5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ <									, , , , , , , , , , , , , , , , , , , ,	\$ -
5.3 115kV 5.3a Line Switches - 3ph w/ motor operator 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						:				\$ -
5.3a Line Switches - 3ph w/ motor operator 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	3.211	Station Service Transformers	U	EA	, -	, -	· -	, -	· -	-
5.3a Line Switches - 3ph w/ motor operator 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
5.3a Line Switches - 3ph w/ motor operator 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	5.3	115kV								
5.3b Disconnect Switches - 3ph w/ manual operator 0 EA \$ - \$ 5,500 \$ - \$ 5.3c VT'S 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			n	FA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3c VT'S 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<										
5.3d CT'S 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$<										
5.3e CCVT'S 0 EA \$ - \$ - \$ - \$ 5.3f Arresters 0 EA \$ - \$ - \$ - \$ 5.3g Wave Traps 0 EA \$ - \$ - \$ - \$										\$ -
5.3f Arresters 0 EA \$ - \$ 1,500 \$ - \$ 5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$										\$ -
5.3g Wave Traps 0 EA \$ - \$ - \$ - \$										
										\$ -
		Station Service Transformers			\$ -			\$ -		\$ -
5.31 Fuses 0 EA \$ - \$ - \$ - \$										\$ -
	,						İ.	·		

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	EQUIPTMENT / MATERIALS				\$ -		\$ -		\$ -
	DUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	125VDC Batteries	0	EA	\$ -	\$ - \$ -	\$ -	\$ -	\$ - \$ -	\$ -
6.4	Control Cables SCADA and Communications	0	EA EA	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -
	Low Voltage AC Distribution		EA	\$ -		\$ -	\$ -	\$ -	
	DC Distribution System	0	EA EA	\$ -	\$ - \$ -	\$ -	\$ -	\$ -	\$ - \$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.10	Generator	0	LA	· -	· -	-	· -		-
TOTAL - CONTI	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS	10002717111207021121111011				Ţ		J.		7
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
	Rigid Bus, Fittings & Insulators	0	LS	\$ -	\$ -		\$ -	\$ 10,500	
	Strain Bus, Connectors & Insulators	0	EA	\$ -	\$ -		\$ -	\$ 39	
	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00		\$ 42,000	
7.5				*	*	1 12,000.00	-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ -		\$ -
G Schod	ack Substation - Removal				\$ -		\$ 136,200		\$ 136,200
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				*		7 200,200		7 ======
	Contractor Mobilization / Demobilization								
	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 1,362	\$ 1,362	\$ 1,362	\$ 1,362
		1.0	L3	ş -	\$ -	\$ 1,302	\$ 1,302	\$ 1,302	3 1,302
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 6,759	\$ 6,759	\$ 6,759	\$ 6,759
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 1,362	\$ 1,362	\$ 1,362	\$ 1,362
	Site Accommodation, Facilities, Storage	1.0	LS	\$ -	\$ -		\$ 1,362	\$ 1,362	
	Engineering					, ,	,		
8.5	Design Engineering	1.0	LS	\$ -	\$ -	\$ 10,896	\$ 10,896	\$ 10,896	\$ 10,896
	LiDAR		Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech		Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking		Site	\$ -	\$ -	\$ 953	\$ -	\$ 953	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 3,405	\$ -	\$ 3,405	\$ -
	Permitting and Additional Costs								
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -			\$ 409	\$ 409	
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1.0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 136	\$ -	\$ 136	
TOTAL - MOR/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 22,149		\$ 22,149

NG & NY Transco - T019 - (Segment B) H. Churchtown Substation - Install

Total: \$ 16,935,106

NG & NY Transco -	T019 - (Segme	ent B)			
		Supply	Installation		Total
H. Churchtown Substation - Install					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	162,650	\$ 1,693,950	\$	1,856,600
2. SUBSTATION FOUNDATIONS	\$	943,027	\$ 1,009,800	\$	1,952,827
3. SUBSTATION STRUCTURES	\$	416,000	\$ 458,060	\$	916,120
4. MAJOR EQUIPTMENT	\$	416,000	\$ 480,000	\$	896,000
5. SMALL EQUIPTMENT / MATERIALS	\$	1,384,800	\$ 938,800	\$	2,323,600
6. CONTROL HOUSE / PANELS	\$	2,115,975	\$ 1,453,475	\$	3,569,450
7. MISC ITEMS	\$	855,378	\$ 1,282,357	\$	2,137,735
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	506,871	\$ 2,775,903	\$	3,282,774
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	6,800,701	\$ 10,092,345	\$	16,935,106
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	Ś	6.800.701	\$ 10.092.345	Ś	16.935.106

escription of work:	
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Estimate Revision:

5

Item	ltem Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	Tr	OTAL
H. Churc	htown Substation - Install										
1. SITE PREP/	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	2.1	ACRES	\$	-	\$ -	\$ 660,000	\$ 1,386,000	\$ 660,000	\$	1,386,000
1.2	Station stone within substation fence.	1,100	CY	\$	27	\$ 29,700	\$ 75	\$ 82,500	\$ 102	\$	112,200
1.3	Substation Fence	1,200	LF	\$	100	\$ 120,000	\$ 100	\$ 120,000	\$ 200	\$	240,000
1.4	Permanent Access Road - 20'-Wide	370	LF	\$	35	\$ 12,950	\$ 285	\$ 105,450	\$ 320	\$	118,400
1.5											
1.6											
1.7											
1.8											
1.9											
1.10											
1.11											
1.12											
1.13											
1.14											
1.15											
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 162,650		\$ 1,693,950		\$	1,856,600
2. SUBSTATIO	N FOUNDATIONS										
2.1	345kV										
2.1a	Circuit Breaker Foundations	0	EA	\$	14,940	\$ -	\$ 16,000	\$ -	\$ 30,940	\$	-
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$	-
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$	-
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$	-
2.1e	Switch Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1j	Instrument Transformer Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1k	Arrester Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1m	Wave Trap Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1n	Reactor Foundations	0	EA	\$	7,470	\$ -	\$ 8,000	\$ -	\$ 15,470	\$	-
2.1p											
2.2	230kV										
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$	-
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$	-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$	-
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$	-
								•		Page	e 31 of 61

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
						** *			
2.2e 2.2f	Switch Stand Foundations	0	EA EA	\$ 3,735 \$ 3,735	\$ - \$ -	\$ 4,000 \$ 4.000		\$ 7,735 \$ 7,735	
2.2f 2.2g	Station Service Transformer Stand Foundation Bus Support 3ph Foundations	0	EA EA	\$ 3,735	\$ -	\$ 4,000			\$ -
2.2g 2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -			\$ 7,735	
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000		\$ 7,735	
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -			\$ 7,735	
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000		\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	8	EA	\$ 5,229	\$ 41,832	\$ 5,600	\$ 44,800	\$ 10,829	\$ 86,632
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	22	EA	\$ 16,434	\$ 361,548			\$ 34,034	· /
2.3e	Switch Stand Foundations	34	EA	\$ 2,988	\$ 101,592			\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3g	Bus Support 3ph Foundations	20	EA	\$ 2,988	\$ 59,760		. ,		\$ 123,760
2.3h	Bus Support 1 Ph Foundations	36	EA	\$ 2,988	\$ 107,568				\$ 222,768
2.3j	Instrument Transformer Stand Foundations	51	EA	\$ 2,988	\$ 152,388			\$ 6,188	
2.3k	Arrester Stand Foundations	15	EA	\$ 2,988	\$ 44,820			\$ 6,188	
2.3m	Wave Trap Stand Foundations	5	EA	\$ 2,988	\$ 14,940		. , ,	\$ 6,188	
2.3n	Station Service Foundations	1		\$ 3,735	\$ 3,735			\$ 7,735	
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000		\$ 201,110	
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000		\$ 154,700	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad			A 22.645	A 22.545	A 25,000	4 25.000	A	4 60.645
2.5a	Control House / Pad	1	EA	\$ 33,615	\$ 33,615				\$ 69,615
2.5b	Generator Foundation	1		\$ 16,000	\$ 16,000	\$ 17,000			\$ 33,000
2.5c 2.6	Station Service Distribution Line - 1ph.	0	LS	\$ -	\$ -	\$ 6,500	\$ -	\$ 6,500	\$ -
2.6a	Lightning Mast Foundations	1	EA	\$ 5,229	\$ 5,229	\$ 5,600	\$ 5,600	\$ 10,829	\$ 10,829
2.6b	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ 5,229	\$ 5,600	. , ,	\$ 10,829	\$ 10,829
2.6c		0	EA	\$ -	\$ -				\$ -
TOTAL - SURS	TATION FOUNDATIONS				\$ 943,027		\$ 1,009,800		\$ 1,952,827
	N STRUCTURES				3 943,027		3 1,005,800		3 1,532,827
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0		\$ 37,000	\$ -			\$ 74,000	
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -			\$ 74,000	
3.1c	Switch Stands	0	EA	\$ 14,800	\$ -			\$ 29,600	
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -			\$ 29,600	
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -		_		\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -	\$ 3,700		\$ 7,400	
3.1g	Instrument Transformer Stand	0	EA EA	\$ 1,850	\$ -		7	\$ 3,700	
3.1h 3.1j	Arrester Stand Wave Trap Stand	0	EA EA	\$ 1,850 \$ 7,400	\$ - \$ -	\$ 1,850 \$ 7,400			\$ - \$ -
3.1j 3.1k	Lightning Masts - 70'	0	EA EA	\$ 7,400	\$ -	\$ 7,400		\$ 14,800 \$ 12,950	
- 22	22014								
3.2 3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0				\$ 33,300		\$ 66,600	•
3.2c	Switch Stands	0			\$ -	\$ 12,025		\$ 24,050	
3.2d	Station Service Transformer Stand	0		\$ 12,025		\$ 12,025		\$ 24,050	
3.2e	Bus Support 3ph	0		\$ -	\$ -			\$ -	
3.2f	Bus Support 1 Ph	0	EA	\$ 2,775	\$ -	\$ 2,775		\$ 5,550	
3.2g	Instrument Transformer Stand	0		\$ 1,295	\$ -			\$ 2,590	
3.2h	Arrester Stand	0	EA	\$ 1,295	\$ -	\$ 1,295		\$ 2,590	
J.211	7 Trester Staria		EA	\$ 5,550		\$ 5,550		\$ 11,100	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	8	EA	\$ 18,500	\$ 148,000	,		\$ 37,000	\$ 296,000
3.3c	Switch Stands	17	EA	\$ 7,955	\$ 135,235				
3.3d 3.3e	Fuse Stand	0	EA EA	\$ 7,955 \$ 3,330	\$ - \$ 33,300			\$ 15,910 \$ 6,660	
3.3f	Bus Support 3ph Bus Support 1 Ph	36	EA	\$ 3,330	\$ 66,600			\$ 3,700	
3.3g	Instrument Transformer Stand	51	EA	\$ 740	\$ 37,740			\$ 1,480	
3.3h	Arrester Stand	15	EA	\$ 740	\$ 11,100				
3.3j	Wave Trap Stand	5		\$ 3,700	\$ 18,500			\$ 7,400	
3.3k	Lightning Mast	1	EA	\$ 6,475	\$ 6,475		· · · · · · · · · · · · · · · · · · ·	\$ 12,950	
3.31	Station Service Transformer Support Stand	1	EA	\$ 1,110	\$ 1,110	\$ 1,110		\$ 2,220	
4. MAJOR EQ	TATION STRUCTURES				\$ 458,060		\$ 458,060		\$ 916,120
4. MAJOR EQ	345kV								
4.1a	Circuit Breakers	0	EA	\$ 300,000	\$ -	\$ 80,000	\$ -	\$ 380,000	\$ -
4.1b	Capacitor Banks	0		\$ -	\$ -	\$ 80,000		\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV			4 250 000	<u> </u>	4 00 000	^	4 222.000	^
4.2a 4.2b	Circuit Breakers Capacitor Banks	0	EA EA	\$ 250,000	\$ - \$ -	\$ 80,000 \$ 80,000		\$ 330,000 \$ 80,000	<u>'</u>
4.20	Capacitor Bariks		EA	, -	· -	\$ 80,000	, -	\$ 60,000	-
4.3	115kV								
4.3a	Circuit Breakers	8	EA	\$ 52,000	\$ 416,000	\$ 60,000	\$ 480,000	\$ 112,000	\$ 896,000
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
	DR EQUIPTMENT				\$ 416,000		\$ 480,000		\$ 896,000
5. SMALL EQU	JIPTMENT / MATERIALS 345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,000	\$ -	\$ 15,000	\$ -	\$ 55,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -		·	\$ 52,500	\$ -
5.1c	VT'S	0	EA	\$ 25,000	\$ -			\$ 37,000	·
5.1d	CT'S								
5.1e		0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
	CCVT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1f	Arresters	0	EA EA	\$ 13,000 \$ 6,500	\$ - \$ -	\$ 8,000 \$ 1,500	\$ - \$ -	\$ 21,000 \$ 8,000	\$ - \$ -
5.1g	Arresters Wave Traps	0 0 0	EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000	\$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ - \$ -
	Arresters	0	EA EA	\$ 13,000 \$ 6,500	\$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000	\$ - \$ - \$ -
5.1g 5.1h	Arresters Wave Traps Station Service Transformers	0 0 0	EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000	\$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ - \$ -
5.1g 5.1h	Arresters Wave Traps Station Service Transformers 230kV	0 0 0	EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000	\$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000	\$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000	\$ - \$ - \$ - \$ -
5.1g 5.1h	Arresters Wave Traps Station Service Transformers	0 0 0	EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000	\$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000	\$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator	0 0 0 0	EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ \$ 35,000	\$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a 5.2b	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0 0 0 0	EA EA EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 30,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500	\$ - \$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2c 5.2d 5.2c	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 31,000 \$ 13,000 \$ 13,000 \$ 10,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2c 5.2d 5.2c 5.2d 5.2e 5.2f	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVY'S Arresters	0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 11,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2d 5.2d 5.2d 5.2f 5.2g	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,5000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 5,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 11,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2c 5.2d 5.2c 5.2d 5.2e 5.2f	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVY'S Arresters	0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 11,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2s	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers	0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,5000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 5,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 11,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2d 5.2c 5.2f 5.2f 5.2g 5.2h	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers	0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,5000 \$ 13,000 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 7,000 \$ 17,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 5,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2f 5.2f 5.2f 5.2g 5.2h	Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCV'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator	0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 5,000 \$ 5,000 \$ 13,000 \$ 33,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 8,000 \$ 7,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$	\$ - 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SCONTEND MODE 1	Item	Item Description	Estimated Quantity	Unit of Measure	Mater	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
SCONTEND MODE 1	TOTAL - SMALL	FOLIIPTMENT / MATERIALS					\$ 1 384 800		\$ 938 800		\$	2,323,600
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12-001 Entering	0.12	001111021100032	•	1	+	232,300	Ų 232,300	ψ 03,000	ψ 05,000	\$ 377,500	-	377,500
Control Cables	6.2	Protection and Telecom Equipment Panels	26	EA	\$	35,000	\$ 910,000	\$ 12,500	\$ 325,000	\$ 47,500	\$	1,235,000
S. SADA and Communications	6.3	125VDC Batteries	2	EA	\$	75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$	200,000
6.6	6.4	Control Cables	1	LS	\$	398,475	\$ 398,475	\$ 398,475	\$ 398,475	\$ 796,950	\$	796,950
Contribution options	6.5	SCADA and Communications	1	EA	\$	50,000	\$ 50,000	\$ 100,000	\$ 100,000	\$ 150,000	\$	150,000
B. Scurly	6.6	Low Voltage AC Distribution	2	EA	\$	50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
B	6.7	DC Distribution System	2	EA	\$	50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
S. Concentration S. S. S. S. S. S. S. S	6.8	Security	1	EA	\$	7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
TOTAL-CONFIOURDIST PANELS / GENERATOR	6.9	Fire Alarm	1	EA	\$	7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto	6.10	Generator	1	EA	\$	100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto-Circums Auto												
2.7.2 Condet & Cable Teach System 460.0 IF 5 185.00 5 74,000 5 200.00 5 350.00 5 350.5 5 44.00	TOTAL - CONTR	OL HOUSE / PANELS / GENERATOR					\$ 2,115,975		\$ 1,453,475		\$	3,569,450
Page Bus, Firtings & Involutors	7. MISC ITEMS											
7.3 Strain Busic Connections & Insulations 2,025.0 IF \$ 383.0 \$ 78,543 \$ 5.33.5 \$ 100,014 \$ 5.99 \$ 186 7.4 Grounding System 10,600.0 IF \$ 6.99 \$ 73,448 \$ 22.58 \$ 345,348 \$ 40 \$ 411 7.5 Strain Busic Connections & Insulations - 1550 V	7.1	Conduit & Cable Trench System	400.0	LF	\$	185.00	\$ 74,000	\$ 170.00	\$ 68,000	\$ 355	\$	142,000
7.4 Grounding System 10,600 UF S 6.93 \$ 73,458 \$ 32.58 \$ 345,388 \$ 40 \$ 41 7.5 Strain Bus Instultators - 3458V 0 EA \$ 2,000 \$. \$ 1,000 \$. \$ 3,050 \$ 7.6 Strain Bus Instultators - 1154V 7.2 EA \$ 1,000 \$ 7,200 \$ 5.00 \$ 3,600 \$ 1,150 \$ 5 7.7 Strain Bus Instultators - 1154V 7.2 EA \$ 1,000 \$ 7,200 \$ 5.00 \$ 3,600 \$ 1,150 \$ 5 7.8 Strain Bus Instultators - 1154V 7.2 EA \$ 1,000 \$ 7,200 \$ 5.00 \$ 3,600 \$ 5 7.8 Strain Bus Instultators - 1154V 7.2 EA \$ 1,000 \$ 7,200 \$ 5.00 \$ 3,600 \$ 5 7.8 Strain Bus Instultators - 1154V 7.2 EA \$ 1,000 \$ 7,200 \$ 5.00 \$ 3,600 \$ 5 7.8 Strain Bus Instultators - 1154V 7.2 EA \$ 1,000 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5	7.2	Rigid Bus, Fittings & Insulators	1,250.0	LF	\$	125.07	\$ 156,338	\$ 237.10	\$ 296,375	\$ 362	\$	452,713
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Fig. Strain Rus Insulations : 230W Part Rus Strain Rus Insulations : 151W Part Rus Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Part Rus Insulations : 151W Pa		Grounding System	10,600.0		\$		\$ 73,458	-	\$ 345,348			418,806
7.7 Strain Rus Insulations - 1154V 72 EA S 1,000 S 72,000 S 50 S 39,600 S 1,550 S 13,78 7.8 Story Online Strain Substance 1 IS S 50,000 S 50,000 S 75,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S 125,000 S	7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$	-
7.9 Style="blook of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the pr		Strain Bus Insulators - 230kV			-		т		т		_	-
7.9 SSVT Service	7.7	Strain Bus Insulators - 115kV	72	EA				\$ 550	\$ 39,600	\$ 1,550	\$	111,600
7.10 Control Conduits from Trench to Equipment		Low Voltage AC Station Service	1									125,000
7.11 Misc. Materials (Above and Below Ground)			1						·		\$	90,000
7.12 7.13 7.14 7.15 7.16 7.17 7.18 7.18 7.19 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.23 7.24 7.25 7.25 7.26 7.76 7.77 7.87 7.88 7.89 7.99 7.90 7.90 7.90 7.91 7.91 7.92 7.92 7.93 7.94 7.95 7.95 7.96 7.97 7.97 7.97 7.98 7.98 7.99 7.99 7.99												250,000
7.13 7.14 7.15 7.16 7.17 7.18 7.19 7.19 7.20 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.28 7.29 7.29 7.29 7.20 7.21 7.21 7.28 7.38 7.49 7.59 7.70 7.20 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.29 7.20 7.20 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.29 7.20 7.20 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.28 7.29 7.29 7.20 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.20 7.20 7.21 7.22 7.23 7.24 7.25 7.26 7.27 7.27 7.28 7.28 7.29 7.29 7.20 7.20 7.20 7.20 7.20 7.20 7.20 7.20		Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.14												
7.15					_							
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TOTAL - MISC ITEMS					1							
TOTAL - MISCITEMS \$ 855,378 \$ 1,282,357 \$ 2,135 H. Churchtown Substation - Install \$ 6,335,890 \$ 7,316,442 \$ 13,652 B. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					1							
H. Churchtown Substation - Install		TEMS					\$ 855.378		\$ 1.282.357		\$	2,137,735
Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilizati												13,652,332
8.1 Mob / Demob 1 LS \$ - \$ - \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 1												
Project Management, Material Handling & Amenities												
8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite 8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,52			1	LS	\$	-	\$ -	\$ 136,523	\$ 136,523	\$ 136,523	\$	136,523
8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ - \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 1,092,187 \$ 1,092	8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS				\$ 677,463	\$ 677,463	\$ 677,463	\$	677,463
8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ - \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 136,523 \$ 1,092,187 \$ 1,092	8 3	Litility PM and Project Oversite	1	IS	1		¢ _	\$ 126.522	\$ 126 522	\$ 126 522	Ġ	136,523
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8.5 Design Engineering 1 LS \$ - \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ 1,092,187 \$ </td <td></td> <td></td> <td>1</td> <td>L)</td> <td>+</td> <td>-</td> <td>· -</td> <td>y 130,323</td> <td>y 130,323</td> <td>7 130,323</td> <td>Y</td> <td>130,323</td>			1	L)	+	-	· -	y 130,323	y 130,323	7 130,323	Y	130,323
8.6 LiDAR - Mile \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -		ů ů	1	IS	Ś		\$ -	\$ 1,092,187	\$ 1,092,187	\$ 1,092,187	Ś	1,092,187
8.7 Geotech 4 Site \$ - \$ - \$ 3,500 \$ 14,000 \$ 3,500 \$ 12 8.8 Surveying/Staking 1 Site \$ - \$ - \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566 \$ 95,566					+							
8.8 Surveying/Staking 1 Site \$ - \$ - \$ 95,566 \$ 95,566 \$ 95,566 \$ 95												14,000
												95,566
1 LESUNE & COMMISSIONINE		Testing & Commissioning			+*			. 23,300	. 23,300		r	

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 341,308	\$ 341,308	\$ 341,308	\$ 341,308
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 40,957	\$ 40,957	\$ 40,957	\$ 40,957
8.13	Real Estate Costs (New)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$ -	\$ 91,200	\$ 91,200	\$ 91,200	\$ 91,200
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 506,871	\$ 506,871	\$ -	\$ -	\$ 506,871	\$ 506,871
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 13,652	\$ 13,652	\$ 13,652	\$ 13,652
TOTAL - MOB,	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 506,871		\$ 2,775,903		\$ 3,282,774

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NG & NY Transco - T019 - (Segment B)

I. Churchtown Substation - Removal

Estimate Revision: 5 Total: \$ 1,120,394

NG & NY Transco - T019 - (Segmen	t B)			
		Supply	Installation	Total	
I. Churchtown Substation - Removal					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ 111,000	\$ 111,000	
2. SUBSTATION FOUNDATIONS	\$	-	\$ 340,400	\$ 340,400	
3. SUBSTATION STRUCTURES	\$	-	\$ 252,600	\$ 252,600	
4. MAJOR EQUIPTMENT	\$	-	\$ 24,600	\$ 24,600	
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 60,000	\$ 60,000	
6. CONTROL HOUSE / PANELS	\$	-	\$ 150,000	\$ 150,000	
7. MISC ITEMS	\$	-	\$ 25,078	\$ 25,078	
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 156,716	\$ 156,716	
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	0.0%
SUBTOTAL:	\$	-	\$ 1,120,394	\$ 1,120,394	
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -	0.0%
TOTAL:	\$		\$ 1,120,394	\$ 1,120,394	

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	e Material Supply Cos	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
I. Church	town Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.		ACRES	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -
1.2	Station stone within substation fence.		СУ	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	740	LF	\$ -	\$ -	\$ 150	\$ 111,000	\$ 150	\$ 111,000
1.4									
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1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ 111,000		\$ 111,000
	FOUNDATIONS								
	345kV								
2.1a	Circuit Breaker Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Reactor Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations		EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations		EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	*
2.2d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$ -	\$ -	\$ 11,000	\$ -	\$ 11,000	\$ -
2.2e	Switch Stand Foundations		EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.2f	Station Service Transformer Stand Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g 2.2h	Bus Support 1 Ph Foundations		EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations		EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j 2.2k			EA		\$ -		'	,	\$ -
	Arrester Stand Foundations	+		1	<u>'</u>			, , , , , ,	•
2.2m	Wave Trap Stand Foundations Miss. Structure Foundations	0	EA EA	<u> </u>	\$ - \$ -		\$ - \$ -	\$ -	\$ - \$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	· -	\$ -	÷ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	2	EA	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ 30,000
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	18	EA	\$ -	\$ -	\$ 5,200	\$ 93,600	\$ 5,200	\$ 93,600
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	6	EA	\$ -	\$ -	\$ 5,200	\$ 31,200	\$ 5,200	\$ 31,200
2.3j	Instrument Transformer Stand Foundations	3	EA	\$ -	\$ -	\$ 5,200	\$ 15,600	\$ 5,200	\$ 15,600
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Steel Transmission Pole Deadend Fnds (1Ph)	9	EA	\$ -	\$ -	\$ 15,000	\$ 135,000	\$ 15,000	\$ 135,000
2.50	Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Sectio		2.	Ţ	·	ψ 13,000	ψ 155,000	Ţ 15,000	Ţ 135,600
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ 67,500	\$ -	\$ 67,500	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ -	\$ -	\$ 14,200	\$ 14,200	\$ 14,200	\$ 14,200
2.5b	Generator Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
	70' Lightning Mast Foundation	4	EA	\$ -	\$ -				
2.6b				\$ -	\$ -		\$ -		\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	FATION FOUNDATIONS				\$ -		\$ 340,400		\$ 340,400
	N STRUCTURES								
3.1	345kV		F.	c		4	<u>^</u>		A
3.1a	Substation A-Frame Structures - Stand alone		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1b	Substation A-Frame Structures - Shared Column		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone		EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column		EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2c	Switch Stands		EA	\$ -	\$ -	\$ 9,750	\$ -	\$ 9,750	
3.2d	Station Service Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2e	Bus Support 3ph		EA	\$ -	\$ -	\$ 2,250	· .	\$ 2,250	*
3.2f	Bus Support 1 Ph		EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	
3.2g	Instrument Transformer Stand		EA	\$ -	\$ -	\$ 1,050	\$ -	\$ 1,050	
3.2h	Arrester Stand		EA	\$ -	\$ -	\$ 1,050		\$ 1,050	
3.2j	Wave Trap Stand		EA	\$ -	\$ -	\$ 4,500		\$ 4,500	
3.2k	Misc. Structures		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-									<u> </u>
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	9	EA	\$ -	\$ -	\$ 6,450	\$ 58,050	\$ 6,450	*
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	6		\$ -	\$ -	\$ 6,450	•	\$ 6,450	*
3.3g	Instrument Transformer Stand	3		\$ -	\$ -	\$ 6,450	\$ 19,350	\$ 6,450	
3.3h	Arrester Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Steel Transmission Pole Deadend (1Ph)	9	EA	\$ -	\$ -	\$ 12,300	\$ 110,700	\$ 12,300	
3.41	Lightning Mast	4	EA	\$ -	\$ -	\$ 6,450		\$ 6,450	
	ATION STRUCTURES		E, t	,	\$ -	ψ 0,130	\$ 252,600	φ 0,130	\$ 252,600
4. MAJOR EQU					,		232,000		3 232,000
4.1	345kV								
4.1a	Circuit Breakers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c	The control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the co		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d				· .					<u> </u>
4.2	230kV								
4.2a	Circuit Breakers		EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks		EA	\$ -	1.	\$ 42,000	·	\$ 42,000	
				İ.	İ .	,500		,555	† ·
4.3	115kV								
4.3a	Circuit Breakers	2	EA	\$ -	\$ -	\$ 12,300	\$ 24,600	\$ 12,300	\$ 24,600
4.3b	Capacitor Banks	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
									1
TOTAL - MAIO	R EQUIPTMENT				\$ -		\$ 24,600		\$ 24,600
	PTMENT / MATERIALS				· .		24,000		24,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c	VT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters		EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2c	VT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S		EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.2f	Arresters		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2g	Wave Traps		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
5.3b	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
5.3c	VT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.3d	CT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.3e	CCVT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.3f	Arresters	9	EA	\$ -	\$ -	\$ 1,500	\$ 13,500	\$ 1,500	\$ 13,500
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMAL	 L EQUIPTMENT / MATERIALS				\$ -		\$ 60,000		\$ 60,000
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
6.2	Protection and Telecom Equipment Panels		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ 150,000		\$ 150,000
7. MISC ITEMS									
7.1	Conduit & Cable Trench System		LS	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	535.0	LF	\$ -	\$ -	\$ 46.88	\$ 25,078	\$ 47	\$ 25,078

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
7.3	Strain Bus, Connectors & Insulators		LF	\$ -	\$ -	\$ 39.35	\$ -	\$ 39	\$ -
7.4	Grounding System		LS	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 25,078		\$ 25,07
I. Church	ntown Substation - Removal				\$ -		\$ 963,678		\$ 963,67
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 9,637	\$ 9,637	\$ 9,637	\$ 9,63
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 47,820	\$ 47,820	\$ 47,820	\$ 47,82
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 9,637	\$ 9,637	\$ 9,637	
8.4	Site Accommodation, Facilities, Storage	1.0	LS	\$ -	\$ -	\$ 9,637	\$ 9,637	\$ 9,637	\$ 9,63
	Engineering								
8.5	Design Engineering	1.0	LS	\$ -	\$ -	\$ 77,094	\$ 77,094	\$ 77,094	\$ 77,09
8.6	Lidar	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 6,746	\$ -	\$ 6,746	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 24,092	\$ -	\$ 24,092	\$ -
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 2,891	\$ 2,891	\$ 2,891	\$ 2,89
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1.0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 964	\$ -	\$ 964	\$ -
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 156,716		\$ 156,71

NG & NY Transco - T019 - (Segment B) J. Pleasant Valley Substation - Install

Total: \$ 8,652,672

NG & NY Transco - T019	- (Segme	nt B)		
		Supply	Installation	Total
J. Pleasant Valley Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	92,400	\$ 380,000	\$ 472,400
2. SUBSTATION FOUNDATIONS	\$	414,410	\$ 442,500	\$ 856,910
3. SUBSTATION STRUCTURES	\$	188,700	\$ 188,700	\$ 377,400
4. MAJOR EQUIPTMENT	\$	1,380,000	\$ 400,000	\$ 1,780,000
5. SMALL EQUIPTMENT / MATERIALS	\$	369,500	\$ 173,000	\$ 542,500
6. CONTROL HOUSE / PANELS	\$	746,400	\$ 393,900	\$ 1,140,300
7. MISC ITEMS	\$	740,939	\$ 988,454	\$ 1,729,393
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	314,588	\$ 1,439,181	\$ 1,753,769
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	4,246,937	\$ 4,405,735	\$ 8,652,672
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	4,246,937	\$ 4,405,735	\$ 8,652,672

Descr	iptic	on of	Wo	rk:

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material S	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Pleasa	nt Valley Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	1.00	ACRES	\$	-	\$ -	\$ 230,000	\$ 230,000	\$ 230,000	\$ 230,000
1.2	Station stone within substation fence.	1,200	CY	\$	27	\$ 32,400	\$ 75	\$ 90,000	\$ 102	\$ 122,400
1.3	Substation Fence	600	LF	\$	100	\$ 60,000	\$ 100	\$ 60,000	\$ 200	\$ 120,000
1.4	Permanent Access Road - 20'-Wide	0	LF				\$ 285	\$ -	\$ 285	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
	PREP/ GRADING/ FENCING / CIVIL					\$ 92,400		\$ 380,000		\$ 472,400
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	3	EA	\$	14,940			\$ 48,000	\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025		\$ 60,000		\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145		\$ 28,000	\$ -	\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145		\$ 28,000	\$ -	\$ 54,145	
2.1e	Switch Stand Foundations	18	EA	\$	4,482			\$ 86,400	\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482		\$ 4,800	\$ -	\$ 9,282	
2.1g	Bus Support 3ph Foundations	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	25	EA	\$	4,482		\$ 4,800		\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	18	EA	\$	4,482				\$ 9,282	
2.1k	Arrester Stand Foundations	9	EA	\$	4,482				\$ 9,282	
2.1m	Wave Trap Stand Foundations	1	EA	\$	4,482			\$ 4,800	\$ 9,282	
2.1n	Reactor Foundations	0	EA	\$	7,470	\$ -	\$ 8,000	\$ -	\$ 15,470	\$ -
2.1p				ļ						
				\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952		\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -

2.2 Caisson DE Foundations (for DE A Transet st stand alone) 0 EA \$ 2,240 \$ \$ \$ \$ 2,400 \$ \$ \$ \$ \$ \$ \$ \$ \$	46,410 \$ 46,410 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,735 \$ 4,73	\$ 46,410 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 34,031 \$ 69,611 \$ 34,031 \$ 34,031 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61,881 \$ 61	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.28 Switch Sand roundations	7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 10,829 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$	\$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 3,73: \$ 3,03: \$ 69,61: \$ 34,03: \$ 61,88: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188: \$ 6,188:	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.1 Station Service Transformer Stand Foundations 0 EA S 3,735 S S 4,000 S S S 228 Bus Support 3 Ph Toundations 0 EA S 3,735 S S 4,000 S S S S S S S S S	7,735 \$ - \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ - \$ 10,829 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$	\$ 7,73! \$ 7,73! \$ 7,73! \$ 7,73! \$ 7,73! \$ 7,73! \$ 7,73! \$ 3,73! \$ 3,03! \$ 69,61! \$ 34,03! \$ 61,88! \$ 6,188! \$ 6,188! \$ 6,188! \$ 6,188! \$ 6,188! \$ 6,188! \$ 6,188! \$ 6,188!	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.2 Bus Support 3 ph Foundations	- \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ - \$ 10,829 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$	\$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 7,731 \$ 9,69,611 \$ 34,031 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181 \$ 6,181	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.21	7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ -	\$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 9,61: \$ 69,61: \$ 34,03: \$ 34,03: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.2 Instrument Transformer Stand Foundations	7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ 7,735 \$ - \$ 10,829 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 7,73: \$ 10,82: \$ 69,61: \$ 34,03: \$ 34,03: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.2	7,735 \$ 7,735 \$ 7,735 \$ - \$ 10,829 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 7,73! \$ 7,73! \$ - \$ 10,82! \$ 69,61! \$ 34,034 \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18!	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.7m Wave Trap Stand Foundations 0 EA \$ 3,725 \$. \$ 4,000 \$. \$. \$. \$. \$. \$. \$. \$. \$. \$	7,735 \$ - \$ 10,829 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 7,73: \$ 10,82! \$ 69,61! \$ 34,03: \$ 6,18! \$ 6,18! \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18: \$ 6,18:	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.7n Misc. Structure Foundations 0 EA \$ S	- \$ 10,829 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 10,825 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.79	10,829 \$ 69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 10,825 \$ 69,615 \$ 34,035 \$ 34,036 \$ 6,186 \$ 6,186 \$ 6,186 \$ 6,186 \$ 6,186 \$ 6,186 \$ 6,186 \$ 6,186 \$ 6,186 \$ 6,186	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
2.3 158V	69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 69,61! \$ 34,03 \$ 34,03 \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18!	\$ \$ \$ \$ \$
2.38	69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 69,61! \$ 34,03 \$ 34,03 \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18!	\$ \$ \$ \$ \$
2.38	69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 69,61! \$ 34,03 \$ 34,03 \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18!	\$ \$ \$ \$ \$
2.30 Capacitor Bank Foundations 0 EA S 33,615 S S 36,000 S S S	69,615 \$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 69,61! \$ 34,03 \$ 34,03 \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18! \$ 6,18!	\$ \$ \$ \$ \$
2.3c	34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 34,034 \$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188	\$ \$ \$ \$
2.3d Caisson DE Foundations (for DE Aframe str shared column)	34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 34,034 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188	\$ \$ \$ \$
2.3e Switch Stand Foundations 0 EA \$ 2,988 \$. \$ 3,200 \$. \$	6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188	\$ \$ \$
2.3f Fuse Stand Foundations 0 EA S 2,988 S - S 3,200 S - S	6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188	\$
2.3g Bus Support 3ph Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ 5 5 2,381 5 5 3,200 \$ 5 5 2,381 5 5 3,200 \$ 5 5 5 5 5 5 5 5 5	6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188 \$ 6,188	<u> </u>
2.3 Instrument Transformer Stand Foundations 0 EA S 2,988 S - S 3,200 S - S 2,38 Arrester Stand Foundations 0 EA S 2,988 S - S 3,200 S - S 5,230 S - S 3,200 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S 5,230 S - S S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S -	6,188 \$ 6,188 \$ 6,188 \$ - \$	\$ 6,188 \$ 6,188 \$ 6,188	-
2.3k	6,188 \$ 6,188 \$ - \$	\$ 6,188 \$ 6,188	ļ Ş
2.3m Wave Trap Stand Foundations 0 EA \$ 2,988 \$ - \$ 3,200 \$ - \$ \$ \$ \$ \$ \$ \$ \$	6,188 \$ - \$	\$ 6,188	\$
2.3n Station Service Foundations 0 EA \$ - \$ - \$ - \$ \$ \$ \$ \$	- \$, .,	\$
2.3p Misc. Structure Foundations 0 EA \$ - \$ - \$ - \$ - \$ \$ \$ \$			\$
2.4 Transformer Foundations	- \$		
2.4a 345-230kV Transformer Foundation w/ Oil Containment		\$ -	\$
2.4a 345-230kV Transformer Foundation w/ Oil Containment			
2.4b 345-115kV Transformer Foundation w/ Oil Containment 0 EA \$ 74,700 \$ - \$ 80,000 \$ - \$ 2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ - \$ - \$ 5 - \$ 2.4d 115kV-69kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$			
2.4c 230kV-115kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ \$	201,110 \$		
2.4d 115kV-69kV Transformer Foundation w/ Oil Containment 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$	154,700 \$		_
2.5 Control House Foundations / Pad 1 EA \$ 51,368 \$ 51,368 \$ 53,700 \$ 53,700 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ - \$ \$ 2.6b Lightning Mast Foundations 0 EA \$ 5,229 \$ - \$ 5 \$ 5,600 \$ - \$ \$ 5 2.6c 0 EA \$ - \$ - \$ - \$ 5 - \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5	- \$ - \$		-
2.5a Control House Addition Foundation (20-ft x 50-ft) 1 EA \$ 51,368 \$ 53,700 \$ 53,700 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ - \$ 2.6 Lightning Mast Foundations 2.6a 70' Lightning Mast Foundation 0 EA \$ 5,229 \$ - \$ 5,600 \$ - \$ 2.6b 0 EA \$ - \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ 3.6c 0 EA \$ - \$ - \$ - \$ 44,410 \$ 442,500	- 3	3 -	13
2.5a Control House Addition Foundation (20-ft x 50-ft) 1 EA \$ 51,368 \$ 53,700 \$ 53,700 \$ 2.5b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ - \$ 2.6 Lightning Mast Foundations 2.6a 70' Lightning Mast Foundation 0 EA \$ 5,229 \$ - \$ 5,600 \$ - \$ 2.6b 0 EA \$ - \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ 2.6c 0 EA \$ - \$ - \$ - \$ 3.6c 0 EA \$ - \$ - \$ - \$ 44,410 \$ 442,500			
2.6 Lightning Mast Foundations EA \$ 5,229 \$ \$ 5,600 \$ \$ \$ 2.6a 70' Lightning Mast Foundation 0 EA \$ 5,229 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	105,068 \$		
2.6a 70' Lightning Mast Foundation 0 EA \$ 5,229 \$ - \$ 5,600 \$ - \$ 2.6b 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - </td <td>33,000 \$</td> <td>\$ 33,000</td> <td>\$</td>	33,000 \$	\$ 33,000	\$
2.6a 70' Lightning Mast Foundation 0 EA \$ 5,229 \$ - \$ 5,600 \$ - \$ 2.6b 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - </td <td></td> <td></td> <td></td>			
2.6b 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td>10,829 \$</td> <td>\$ 10,82</td> <td>\$</td>	10,829 \$	\$ 10,82	\$
TOTAL - SUBSTATION FOUNDATIONS \$ 414,410 \$ 442,500	- \$		\$
	- \$	\$ -	\$
	\$		
3. SUBSTATION STRUCTURES			
3.1 345kV			
3.1a Substation A-Frame Structures - Stand alone 0 EA \$ 37,000 \$ - \$ 37,000 \$ - \$	74,000 \$		_
3.1b Substation A-Frame Structures - Shared Column 0 EA \$ 37,000 \$ - \$ 37,000 \$ - \$	74,000 \$		<u> </u>
3.1c Switch Stands 3 EA \$ 14,800 \$ 44,400 \$ 14,800 \$ 44,400 \$ 3.1d Station Service Transformer Stand 0 EA \$ 14,800 \$ - \$ 14,800 \$ - \$	29,600 \$		
3.1d Station Service Transformer Stand 0 EA \$ 14,800 \$ - \$ 14,800 \$ - \$ \$ 3.1e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ \$	29,600 \$,	-
3.1f Bus Support 1 Ph 25 EA \$ 3,700 \$ 92,500 \$ 3,700 \$ 92,500 \$	7,400 \$	·	<u> </u>
3.1g Instrument Transformer Stand 15 EA \$ 1,850 \$ 27,750 \$ 1,850 \$ 27,750 \$	3,700 \$		
3.1h Arrester Stand 9 EA \$ 1,850 \$ 16,650 \$ 1,850 \$ 16,650 \$	3,700 \$		
3.1) Wave Trap Stand 1 EA \$ 7,400 \$ 7,400 \$ 7,400 \$ 7,400 \$	14,800 \$		
3.1k Misc Structures 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$	12,950 \$		
		,,,,,,	Τ΄
3.2 230kV			
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$			\$
3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$	66,600 \$	\$ 66,600	
3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$	66,600 \$ 66,600 \$		
3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$		\$ 66,600 \$ 24,050	\$

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2e	Bus Support 3ph	0	EA	\$ -			\$ -	•	\$ -
3.2f	Bus Support 1 Ph	0	EA	\$ 2,775	\$ -		\$ -		\$ -
3.2g	Instrument Transformer Stand	0	EA	\$ 1,295	\$ -		\$ -		\$ -
3.2h	Arrester Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -		\$ -
3.2j	Wave Trap Stand	0	EA	\$ 5,550	\$ -		\$ -	\$ 11,100	\$ -
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
2.2	115kV								
3.3 3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	\$ 18,500		\$ 37,000	
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	. ,	\$ -	\$ 15,910	
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -		\$ -	\$ 15,910	
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 6,660	
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -	\$ 740		\$ 1,480	
3.3h	Arrester Stand	0	EA	\$ 740	\$ -		\$ -	\$ 1,480	
3.3j	Wave Trap Stand	0	EA	\$ 3,700	\$ -		\$ -	\$ 7,400	
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -		\$ -	\$ 12,950	
				, ,		,		,	
TOTAL - SUBS	TATION STRUCTURES				\$ 188,700		\$ 188,700		\$ 377,400
4. MAJOR EQ	UIPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	1	EA	\$ 200,000	\$ 200,000	\$ 80,000	\$ 80,000	\$ 280,000	\$ 280,000
4.1b	Capacitor Banks - W/ Center Tap VT and Reactors	2	EA	\$ 370,000	\$ 740,000	\$ 80,000	\$ 160,000	\$ 450,000	\$ 900,000
4.1c	Circuit Breakers - Cap Switching	2	EA	\$ 220,000	\$ 440,000	\$ 80,000	\$ 160,000	\$ 300,000	\$ 600,000
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ 250,000	\$ -	\$ 80,000	\$ -		\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 225,000	\$ -	\$ 60,000	\$ -	\$ 285,000	
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL MALO	DR EQUIPTMENT				\$ 1.380.000		\$ 400.000		\$ 1.780.000
	JIPTMENT / MATERIALS				\$ 1,380,000		\$ 400,000		\$ 1,780,000
5.1	345kV								
5.1a									
		1	EΛ	\$ 40,000	\$ 40,000	\$ 15,000	\$ 15,000	\$ 55,000	\$ 55,000
5 1h	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	1 3	EA	\$ 40,000	\$ 40,000 \$ 105,000		\$ 15,000 \$ 52,500	\$ 55,000 \$ 52,500	
5.1b 5.1c	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ 35,000	\$ 105,000	\$ 17,500	\$ 52,500	\$ 52,500	\$ 157,500
5.1c	Disconnect Switches - 3ph w/ manual operator VT'S	3	EA EA	\$ 35,000 \$ 25,000	\$ 105,000 \$ 75,000	\$ 17,500 \$ 12,000	\$ 52,500 \$ 36,000	\$ 52,500 \$ 37,000	\$ 157,500 \$ 111,000
5.1c 5.1d	Disconnect Switches - 3ph w/ manual operator VT'S CT'S	3 3 3	EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000	\$ 17,500 \$ 12,000 \$ 8,000	\$ 52,500 \$ 36,000 \$ 24,000	\$ 52,500 \$ 37,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000
5.1c 5.1d 5.1e	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	3 3 3 3	EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000
5.1c 5.1d 5.1e 5.1f	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	3 3 3 3 9	EA EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000
5.1c 5.1d 5.1e	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	3 3 3 3	EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000
5.1c 5.1d 5.1e 5.1f 5.1g	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	3 3 3 3 9	EA EA EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000
5.1c 5.1d 5.1e 5.1f 5.1g	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	3 3 3 3 9	EA EA EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000
5.1c 5.1d 5.1e 5.1f 5.1g	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	3 3 3 3 9	EA EA EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000
5.1c 5.1d 5.1e 5.1f 5.1g 5.1h	Disconnect Switches - 3ph w/ manual operator VT'S CCT'S Arresters Wave Traps Station Service Transformers	3 3 3 3 9	EA EA EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000 \$ -
5.1c 5.1d 5.1e 5.1f 5.1g 5.1h	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV	3 3 3 3 9 1 0	EA EA EA EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 200,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000 \$ -	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000 \$ -	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000 \$ -
5.1c 5.1d 5.1e 5.1f 5.1g 5.1h 5.2 5.2a 5.2b 5.2c	Disconnect Switches - 3ph w/ manual operator VT'S CC'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	3 3 3 3 9 1 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 6,500 \$ 200,000 \$ 200,000 \$ 35,000 \$ 35,000 \$ 30,000 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000 \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 50,000 \$ 51,500 \$ 51,500 \$ 8,000 \$ 17,500 \$ 8,000	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000 \$ - \$ - \$ - \$ - \$ -	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 250,000 \$ 47,500 \$ 21,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000 \$ - \$ - \$ - \$ - \$ -
5.1c 5.1d 5.1e 5.1f 5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2d	Disconnect Switches - 3ph w/ manual operator VT'S CC'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S	3 3 3 3 9 1 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA	\$ 35,000 \$ 25,000 \$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 35,000 \$ 31,000 \$ 13,000 \$ 13,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 250,000 \$ 47,500 \$ 21,000 \$ 21,000	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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5.1c 5.1d 5.1e 5.1f 5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2e 5.2f 5.2s 5.3 5.3	Disconnect Switches - 3ph w/ manual operator VT'S CC'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator VT'S CC'S CC'S Arresters Station Service Transformers	3 3 3 3 9 1 1 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 200,000 \$ 35,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,0	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 50,000 \$ 50,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 15,000 \$ 17,500 \$ 15,000 \$ 17,500	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 250,000 \$ 250,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,000 \$ 32,	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1c 5.1d 5.1e 5.1f 5.1g 5.1h 5.2 5.2a 5.2b 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2d 5.2e 5.2f 5.2e 5.3e 5.3e	Disconnect Switches - 3ph w/ manual operator VT'S CC'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CC'S CCV'S Arresters Wave Traps Station Service Transformers	3 3 3 3 9 1 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 35,000 \$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 30,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 20,000 \$ 20,000 \$ 20,000	\$ 105,000 \$ 75,000 \$ 39,000 \$ 39,000 \$ 58,500 \$ 13,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 50,000 \$ 50,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 15,000 \$ 17,500 \$ 15,000 \$ 17,500	\$ 52,500 \$ 36,000 \$ 24,000 \$ 24,000 \$ 13,500 \$ 8,000 \$ - - - - - - - - - - - - - - - - - - -	\$ 52,500 \$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 250,000 \$ 250,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,	\$ 157,500 \$ 111,000 \$ 63,000 \$ 63,000 \$ 72,000 \$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

1.5 Average	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.96 Satest service transformers 10 1A 5 5 5 5 5 5 5 5 5	5.3f	Arresters			\$ 3,420	\$ -	\$ 6,000	•	\$ 9,420	\$ -
1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5. 1.5.						\$ -				
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6.1 CONTROL ASSURANCE ASSURANCE AS CONTROL SECURITY PARTS 6.2 DESCRIPTION ASSURANCE AS CONTROL SECURITY PARTS 6.3 DESCRIPTION ASSURANCE AS CONTROL SECURITY PARTS 6.4 CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6.4 CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6.5 DESCRIPTION AS CONTROL SECURITY PARTS 6.6 CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL SECURITY PARTS 6. CONTROL ASSURANCE AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL AS CONTROL A						\$ 369,500		\$ 173,000		\$ 542,500
8. Prediction and Forecome Engineering Passals 8. BA \$ \$3,000 \$ 173,000 \$ 112,000 \$ 42,500 \$ 227,500 \$ 227,500 \$ 6.										
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6.2 Carrola ciples 1 15 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000 5 244,000	6.2	Protection and Telecom Equipment Panels	5	EA	\$ 35,000	\$ 175,000	\$ 12,500	\$ 62,500	\$ 47,500	\$ 237,500
6.5 (AAA) and Communications 6.1 (and Visigne & Estimatorium) 6.2 (and Assigned Estimatorium) 6.3 (and Assigned Estimatorium) 6.4 (b) Coordinate System 6.5 (and Visigned Estimatorium) 6.6 (and Visigned Estimatorium) 6.7 (and Assigned Estimatorium) 6.8 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (and Assigned Estimatorium) 6.9 (a	6.3	125VDC Batteries	0	EA	\$ 75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
Go Controllation System	6.4	Control Cables	1	LS	\$ 246,400	\$ 246,400	\$ 246,400	\$ 246,400	\$ 492,800	\$ 492,800
6.7 Construction System 0 EA \$ 5,000 \$. \$ 110,000 \$. \$ 150,000 \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$. \$.	6.5	SCADA and Communications	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8 Security Parts 0 EA 5 7,500 5 5 7,500 5 5 15,000 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,500 5 1,5	6.6	Low Voltage AC Distribution	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
Fig. Allim	6.7	DC Distribution System	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -		
6.10 Generator 0 FA \$ 100,000 \$ \$ \$ \$ \$ \$ \$ \$ \$	6.8	Security	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
		Fire Alarm				\$ -		\$ -	,	\$ -
7.4 Mode (1964) 7.1 Conduit & Cale French System	6.10	Generator	0	EA	\$ 100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
7.4 Mode (1964) 7.1 Conduit & Cale French System										
7.1 Conduct & Calebrare Processing 7.2 Right Schilder French System						\$ 746,400		\$ 393,900		\$ 1,140,300
Page days, Fattings, Brossdorton & Insulatoris 1,500 1F 5 12500 5 187,605 5 237,10 5 356,500 5 360 5 5 43,255 7 3 3 5 5 5 5 5 5 5 5								·		
Strain But, Connectors & Insulators										
7.4 Grounding System 3,800 LF S 6,93 S 26,334 S 32,58 S 123,804 S 40 S 150,18 7.5 Strain Bus Insulations - 365EV O EA S 2,000 S S 1,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S 3,000 S S S 3,000 S S S 3,000 S S S S S S S S S	7.2	Rigid Bus, Fittings & Insulators	1,500	LF	\$ 125.07	\$ 187,605	\$ 237.10	\$ 355,650	\$ 362	\$ 543,255
The first instructions - 34MY										
7.6 Strain But Insulators - 280W	7.4	Grounding System	3,800	LF	\$ 6.93	\$ 26,334	\$ 32.58	\$ 123,804	\$ 40	\$ 150,138
7.6 Strain But Insulators - 280W	7.5	Strain Rus Insulators - 3/15/V	0	FΔ	\$ 2,000	¢ .	\$ 1,050	¢ -	\$ 3,050	\$.
7.7 Strain Bus Insulators - 1154V 0 EA 5 1,000 5 5 550 5 5 1,500 5 - 7										
7.8 Low Voltage AC Station Service								'	, , , , ,	
7.9 SYT Service										
Total Control Conduits from Trench to Equipment 1 S \$ 125,000 \$ 125,000 \$ 125,000 \$ 250,000 \$ 250,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 360,000 \$ 36							,		,	
7.11 Misc. Materials (Above and Below Ground) 1 LS \$ 180,000 \$ 180,000 \$ 380,000 \$ 360,000 7.12 F.13 Misc. Materials (Above and Below Ground) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						_	, .,			
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7.22	7.20									
7.23 7.24 7.25 TOTAL - MISC ITEMS S. 740,939 S. 988,454 S. 1,729,393 S. MOB/DEMOB, ENGINEERING, FERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / De	7.21									
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Same										
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization	TOTAL - MISC	ITEMS				\$ 740,939		\$ 988,454		\$ 1,729,393
Contractor Mobilization / Demobilization / Demobilization / Sat Mob / Demob LS S S S S S S S S	J. Pleasant Valley Substation - Install					\$ 3,932,349		\$ 2,966,554		\$ 6,898,903
8.1 Mob / Demob										
Project Management, Material Handling & Amenities			1	10	ċ	ė	¢ 60,000	¢ 60,000	¢ 60,000	¢ 60,000
8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite 8.4 Site Accommodation, Facilities, Storage 8.5 Design Engineering 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 LS 1 L			1	LJ		-	, UO,389	y 00,389	y 00,389	y 00,389
8.3 Utility PM and Project Oversite 1 LS \$ - \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 6		Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ 342,341	\$ 342,341	\$ 342,341	\$ 342,341
8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ - \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989 \$ 68,989		, , , ,								
Engineering LS \$ - \$ \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,9										
8.5 Design Engineering 1 LS \$ - \$ - \$ 551,912 \$ 551,912 \$ 551,912 \$ 551,912			1	LS	\$ -	Ş -	\$ 68,989	\$ 68,989	\$ 68,989	\$ 68,989
8.6 LIDAR - Mile \$ - \$ - \$ - \$ - \$ -										
	8.6	LIDAR	-	Mile	\$ -	Ş -	Ş -	Ş -	Ş -	5 -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	то	OTAL
8.7	Geotech	2	EA	\$	-	\$ -	\$ 3,500	\$ 7,000	\$ 3,500	\$	7,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 48,292	\$ 48,292	\$ 48,292	\$	48,292
	Testing & Commissioning										
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 172,473	\$ 172,473	\$ 172,473	\$	172,473
	Permitting and Additional Costs										
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 20,697	\$ 20,697	\$ 20,697	\$	20,697
8.13	Real Estate Costs (New)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ 82,600	\$ 82,600	\$ 82,600	\$	82,600
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 314	1,588	\$ 314,588	\$ -	\$ -	\$ 314,588	\$	314,588
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 6,899	\$ 6,899	\$ 6,899	\$	6,899
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 314,588		\$ 1,439,181		\$	1,753,769

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J. SS Pleasant Valley-Install

NG & NY Transco - T019 - (Segment B) K. Pleasant Valley Substation - Removal

Total: \$

47,977

NG & NY Transco - T019 - (Segment B)												
	Supply		Installation		Total							
K. Pleasant Valley Substation - Removal												
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ 40,500	\$	40,500							
2. SUBSTATION FOUNDATIONS	\$	-	\$ -	\$	-							
3. SUBSTATION STRUCTURES	\$	-	\$ -	\$	-							
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$	-							
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ -	\$	-							
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$	-							
7. MISC ITEMS	\$	-	\$ -	\$	-							
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ -	\$	7,477							
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-							
SUBTOTAL:	\$	-	\$ 40,500	\$	47,977							
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-							
TOTAL:	\$	-	\$ 40,500	\$	47,977							

Description	of Work:								
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate Cost		Total Unit Rate	TOTAL
K. Pleas	ant Valley Substation - Removal								
	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	270	LF	\$ -	\$ -	\$ 150	\$ 40,500	\$ 150	\$ 40,500
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ 40,500		\$ 40,500
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Reactor Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0		\$ -	\$ -	\$ 7,200		\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000		\$ 22,000	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ 11,000		\$ 11,000	
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -

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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV				_	4		4	
2.3a	Circuit Breaker Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c 2.3d	Caisson DE Foundations (for DE A frame str stand alone)	0	EA EA	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.3u 2.3e	Caisson DE Foundations (for DE A frame str shared column) Switch Stand Foundations	0		\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	
2.3e	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CURC	TATION FOLINDATIONS				\$ -		\$ -		\$ -
	ATION FOUNDATIONS N STRUCTURES				\$ -		\$ -		\$ -
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand	0		\$ -	\$ -	•	\$ -	\$ 1,050	
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ 1,050	\$ -	\$ 1,050	
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2c	Switch Stands	0	EA	\$ -	\$ -	\$ 9,750		\$ 9,750	
	Station Service Transformer Stand	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 3ph	0		\$ -			\$ -		\$ -
	Bus Support 1 Ph	0		\$ -	\$ -			\$ 2,250	
3.2g	Instrument Transformer Stand	0		\$ -		\$ 1,050		\$ 1,050	
3.2h	Arrester Stand	0		\$ -		\$ 1,050		\$ 1,050	
3.2j	Wave Trap Stand	0		\$ -	\$ -			\$ 4,500	
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AAFIA/								
	115kV	-	F.	ć	ć	d 45.555	ć	d	A
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0		\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0			\$ -		\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA		\$ -		\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0			\$ -		\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0		<u> </u>	\$ -		\$ -	\$ -	\$ -
3.3h	Arrester Stand	0			\$ -		\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION CTRUCTURES								
	ATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0		<u> </u>	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0		\$ -	\$ -		\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	0		\$ -	\$ -	\$ 14,500	\$ -	\$ 14,500	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ -		\$ -
5. SMALL EQU	PTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0		\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps	0	EA		\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2c	VT'S	0			\$ -		\$ -	\$ 1,500	\$ -
5.2d	CT'S	0	EA		\$ -		\$ -	\$ -	\$ -
5.2e	CCVT'S	0			\$ -	\$ 1,500		\$ 1,500	\$ -
5.2f	Arresters	0		\$ -	\$ -		\$ -	\$ 2,500	\$ -
5.2g	Wave Traps	0		\$ -	\$ -		\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers	0			\$ -	\$ -	\$ -	\$ -	\$ -
				·	'		•		
				1					
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0			\$ -	\$ 5,500		\$ 5,500	
5.3c	VT'S	0			\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0			\$ -		\$ -	\$ -	\$ -
5.3e	CCVT'S	0			\$ -		\$ -		\$ -
5.3f	Arresters	0			\$ -	\$ 1,500		\$ 1,500	
5.3g	Wave Traps	0			\$ -		\$ -	\$ -	\$ -
	Station Service Transformers	0			\$ -		\$ -		\$ -
5.3j	Fuses	0			\$ -		\$ -	\$ -	\$ -
3.3,		0		ļ -	7	-	Ŧ		Ŧ
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ -		\$ -
	OUSE / PANELS / GENERATOR				Ÿ J		Ť		•
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
	Protection and Telecom Equipment Panels	0				\$ -		\$ 130,000	
U.2	resection and relectin Equipment runes	0		1 *	I *	¥	¥	·	D 40 -£(

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.10	ocherotor -		1,	Ť	· ·	,	,	,	*
TOTAL - CONTE	OL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS					Ţ		7		7
	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
	Rigid Bus, Fittings & Insulators	0	L.S.	\$ -	\$ -		\$ -	\$ 42,000	
	Strain Bus, Connectors & Insulators	0	L.S.	7	Ÿ			T/	
	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	TFMS				\$ -		\$ -		\$ -
					T				Ŧ
	ant Valley Substation - Removal				\$ -		\$ 40,500		\$ 40,500
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 1,013	\$ 1,013	\$ 1,013	\$ 1,013
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 2,010	\$ 2,010	\$ 2,010	\$ 2,010
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 405	\$ 405	\$ 405	\$ 405
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 405	\$ 405	\$ 405	
	Engineering			Ť	T	7	7	,	7
	Design Engineering	1	LS	\$ -	\$ -	\$ 3,240	\$ 3,240	\$ 3,240	\$ 3,240
	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Surveying/Staking	1	Site	\$ -	\$ -	\$ 284	\$ 284	\$ 284	\$ 284
	Testing & Commissioning	1	Site	-	, -	ý 204	204	ÿ 204	7 204
8.9	Testing & Commissioning Testing & Commissioning of T-Line and Equipment		LS	\$ -	ć	\$ 1,013	\$ -	\$ 1,013	
		-	LS	\$ -	\$ -	\$ 1,013	\$ -	\$ 1,013	\$ -
	Permitting and Additional Costs					_	_		
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 122		\$ 122	
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17	- , ,	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Sales Tax on Materials	1	LS	\$ -	\$ -	Ś -	\$ -		\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS	i.	\$ -	\$ 41		\$ 41	
	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -	, 41	\$ 7,477	, 41	\$ 7,477
					•		7,777		,,,,,,,,

Interconnection Knickerbocker Station

Estimate Revision: 5 Total: \$ 3,627,657

NG & NY Transco - T019 - (Segment B)											
		Supply		Installation		Total					
L. Interconnection Knickerbocker Station											
1. CLEARING & ACCESS	\$	-	\$	436,850	\$	436,850					
2. FOUNDATIONS	\$	756,457	\$	764,558	\$	1,521,015					
3. STRUCTURES	\$	556,300	\$	370,424	\$	926,724					
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-					
5. INSULATORS, FITTINGS, HARDWARE	\$	128,000	\$	55,640	\$	183,640					
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	115,261	\$	444,167	\$	559,427					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-					
SUBTOTAL:	\$	1,556,017	\$	2,071,639	\$	3,627,657					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	Ś	1.556.017	Ś	2.071.639	Ś	3.627.657					

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
L. Interc	onnection Knickerbocker Station										
1. CLEARING 8	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$	10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45		\$ 45	\$	-
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$	14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000	\$ 70	\$	245,000
1.6	Matting - To Work Area	525.0	LF	\$	-	\$ -	\$ 70	\$ 36,750	\$ 70	\$	36,750
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800	\$ -	\$ 516,800	\$	-
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$	5,000
1.9	Work Pads	35,000.0	SF	\$	-	\$ -	\$ 4	\$ 123,200	\$ 4	\$	123,200
1.10	Restoration for Work Pad areas	7,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 1,050	\$ 0	\$	1,050
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$	-
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$	-
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$	-
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$	-
1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$	-
1.16	Culverts / Misc. Access	-	EA	\$	750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$	-
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$	1,850
1.18						\$ -		\$ -		\$	-
1.19						\$ -		\$ -		\$	-
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$	-
TOTAL - CLEAR	RING & ACCESS					\$ -		\$ 436,850		\$	436,850
2. FOUNDATION	DNS										
2.1	Drilled Pier - 115kV Single Circuit H- Pole Tangent	2	EA	\$	64,635	\$ 129,270	\$ 65,327	\$ 130,654	\$ 129,962	\$	259,924
2.2	Drilled Pier - 115kV Single Circuit Single Pole Angle/DE	1	EA	\$	76,484	\$ 76,484	\$ 77,303	\$ 77,303	\$ 153,787	\$	153,787
2.3	Drilled Pier - 345kV Single Circuit H-Pole Angle /DE	4	EA	\$	137,676	\$ 550,703	\$ 139,150	\$ 556,601	\$ 276,826	\$	1,107,304
2.4										Ļ—	
2.5	Rock Excavation Adder	-	CY	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$	-
2.6						\$ -		\$ -		\$	-
2.7						\$ -		\$ -		\$	-
2.8				-		\$ -		\$ -		\$	-
2.9				1		\$ -		\$ -		\$	-

Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	oply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.10						\$ -		\$ -		\$ -
2.11						\$ -		\$ -		\$ -
2.12						\$ - \$ -		\$ - \$ -		\$ - \$ -
2.13						} - \$ -		\$ -		\$ - \$ -
2.15					-	,		\$ -		\$ -
TOTAL - FOUN	DATIONS					\$ 756,457		\$ 764,558		\$ 1,521,015
3. STRUCTURE						,		+ 10.,000		,,
	115kV Single Circuit Single Pole Angle/DE	1	Structure	\$	55,315	\$ 55,315	\$ 33,189	\$ 33,189	\$ 88,504	\$ 88,504
	115kV Single Circuit Single Pole Tangent	2	Structure	\$		\$ 78,521	\$ 23,556			\$ 125,634
3.3	345kV Single Circuit Single Pole Angle /DE	4	Structure	\$	104,730	\$ 418,921	\$ 62,838	\$ 251,353	\$ 167,569	\$ 670,274
3.4					:	\$ -		\$ -		\$ -
3.5	Install Grounding and Grounding Accessories	7	Pole	\$		\$ 3,542	\$ 5,539	\$ 38,770		\$ 42,312
3.6						\$ - \$ -		\$ - \$ -		\$ -
3.7						\$ - \$ -		\$ - \$ -		\$ - \$ -
3.9						} - \$ -		\$ -		\$ -
3.10						\$ -		\$ -		\$ -
3.11						\$ -		\$ -		\$ -
3.12						\$ -		\$ -		\$ -
3.13						\$ -		\$ -		\$ -
3.14 3.15						\$ - \$ -		\$ - \$ -		\$ - \$ -
TOTAL - STRUC	TUDES							•		
						\$ 556,300		\$ 370,424		\$ 926,724
	R, SHIELDWIRE, OPGW	-	LF	Ś	1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571	-	LF LF	\$	1.35	, -	\$ 5.00 \$ 5.00	\$ -		\$ - \$ -
4.3	(1) 3/8" EHS7 Steel	-	LF	\$, -	\$ 5.00	\$ -		\$ -
4.5	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$		\$ -	\$ 30,000	\$ -		\$ -
4.6	Remove Existing OPGW Cable	-	Mile	\$	- !	\$ -	\$ 12,000	\$ -		\$ -
4.7	Remove Existing EH7	-	Mile	\$	- :	\$ -	\$ 12,000	\$ -	,	\$ -
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$	1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.9	Bides Belev Beleveted	-	C-4			\$ -	A 2.500	<u>^</u>	\$ 3,500.00	<u> </u>
4.10 4.11	Rider Poles - Relocated Rider Poles	-	Set EA	\$	1,750	\$ - \$ -	\$ 3,500 \$ 3,500	\$ - \$ -	,	\$ - \$ -
	ICTOR, SHIELDWIRE, OPGW:	-	LA .	7		\$ -	3,300	\$ -		\$ -
	FITTINGS, HARDWARE									
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$	1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
	115kV Tangent (1-Group of 9-Bells Each Assembly)	12	Assembly	\$	900	\$ 10,800	\$ 560	\$ 6,720	,	\$ 17,520
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$	1,800	\$ 108,000	\$ 720	\$ 43,200		\$ 151,200
5.4 5.5	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	7	Assembly	\$	900	\$ 6,300 \$ -	\$ 560	\$ 3,920 \$ -		\$ 10,220 \$ -
	OPGW Assembly - Tangent	2	Assembly	\$	200	\$ 400	\$ 150	\$ 300	-	\$ 700
	OPGW Assembly - langent OPGW Assembly - Angle / DE	10	Assembly	\$	250	\$ 2,500	\$ 150	\$ 1,500		\$ 4,000
	OHSW Assembly - Tangent	-	Assembly	\$	200	\$ -	\$ 150			\$ -
	OHSW Assembly - Angle / DE	-	Assembly	\$	250	\$ -	\$ 150	\$ -		\$ -
5.10	OPGW Splice Boxes	-	Set	\$	1,750	\$ -	\$ 1,746		,	\$ -
5.11	OPGW Splice & Test	-	EA	\$	1,400	\$ -	\$ 2,520	\$ -	-,	\$ -
5.12 5.13	Spacer - Conductor Vibration Dampers - Conductor	-	EA EA	\$	50 S	\$ - \$ -	\$ 35 \$ 35			\$ - \$ -
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA EA	\$, - \$ -	\$ 35			\$ -
	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -		\$ -
5.16	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -		\$ -
5.17										
5.18										
5.19 5.20										
	ATOR FITTINGS HARDWARF					t 420.000		\$ 55.640		ć 402.C10
	ATOR, FITTINGS, HARDWARE					\$ 128,000		\$ 55,640		\$ 183,640
L. Interco	onnection Knickerbocker Station				:	\$ 1,440,757		\$ 1,627,472		\$ 3,068,229
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization						A			
6.1	Mob / Demob	1	LS	\$	- !	\$ -	\$ 30,682	\$ 30,682	\$ 30,682	\$ 30,682

Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 152,253	\$ 152,253	\$ 152,253	\$ 152,25
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 30,682	\$ 30,682	\$ 30,682	\$ 30,68
6.4	Site Accommodation, Facilities, Storage	1	LS	\$		\$ -	\$ 30,682	\$ 30,682	\$ 30,682	\$ 30,68
	Engineering									
6.5	Design Engineering	1	LS	\$		\$ -	\$ 153,411	\$ 153,411	\$ 153,411	\$ 153,41
6.6	Lidar	1	LS	\$	-	\$ -	\$ 9,205	\$ 9,205	\$ 9,205	\$ 9,20
6.7	Geotech	1	Location	\$	-	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,50
6.8	Surveying/Staking	1	LS	\$		\$ -	\$ 21,478	\$ 21,478	\$ 21,478	\$ 21,47
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$		\$ -	\$ 9,205	\$ 9,205	\$ 9,205	\$ 9,20
6.13	Real Estate Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$	115,261	\$ 115,261	\$ -	\$ -	\$ 115,261	\$ 115,26
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 3,068	\$ 3,068	\$ 3,068	\$ 3,06
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 115,261		\$ 444,167		\$ 559,42

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NG & NY Transco - T019 - (Segment B) M. Interconnection Churchtown Station

5		Total:	\$ 2,201,713	
NG & NY Transco - T019 - (Segment	В)		
		Supply	Installation	Total
M. Interconnection Churchtown Station				
1. CLEARING & ACCESS	\$	-	\$ 436,850	\$ 436,850
2. FOUNDATIONS	\$	212,820	\$ 615,100	\$ 827,920
3. STRUCTURES	\$	318,188	\$ 227,557	\$ 545,745
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	44,000	\$ 27,410	\$ 71,410
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	46,001	\$ 273,787	\$ 319,787
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	\$ -
SUBTOTAL:	\$	621,009	\$ 1,580,703	\$ 2,201,713
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	621,009	\$ 1,580,703	\$ 2,201,713

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e Mat	iterial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	connection Churchtown Station									
1. CLEARING 8	ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$	-	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$	-	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$ -	\$	-	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$ -	\$	-	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$	-	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	525.0	LF	\$ -	\$	-	\$ 70	\$ 36,750	\$ 70	\$ 36,750
1.7	Snow Removal	-	LS	\$ -	\$	-	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$	-	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	35,000.0	SF	\$ -	\$	-	\$ 4	\$ 123,200	\$ 4	\$ 123,200
1.10	Restoration for Work Pad areas	7,000.0	SF	\$ -	\$	-	\$ 0.2	\$ 1,050	\$ 0	\$ 1,050
1.11	Temporary Access Bridge	-	EA	\$ -	\$	-	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$	-	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$	-	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$	-	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000		-	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750	0 \$	-	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$	-	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$	-		\$ -		\$ -
1.19					\$	-		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 2	7 \$	-	\$ 75	\$ -	\$ 102	\$ -
	RING & ACCESS				\$	-		\$ 436,850		\$ 436,850
2. FOUNDATION	ONS									
2.1	Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE	2	EA	\$ 30,403	_	,				· · · · · · · · · · · · · · · · · · ·
2.2	Drilled Pier - 115kV Single Circuit H- Pole Tangent	3	EA	\$ 30,403		- ,		\$ 92,186		\$ 183,394
2.3	Drilled Pier - 115kV Single Circuit Single Pole Angle/ DE	2	EA	\$ 30,403	3 \$	60,806	\$ 30,729	\$ 61,457	\$ 61,131	\$ 122,263
2.4										
2.5	Rock Excavation Adder	200	CY	\$ -	\$	-	\$ 2,000	\$ 400,000	\$ 2,000	\$ 400,000
2.6					\$	-		\$ -		\$ -
2.7					Ś	-		\$ -		\$ -
2.8					\$	-		\$ -		\$ -
2.9					\$	-		\$ -		\$ -
2.10					\$	-		\$ -		\$ -

Estimate

Revision:

2.17	**************************************
2.13	\$ - \$ - \$ -
2.13	\$ - \$ -
2.15	\$ -
2.15 S	·
STRUCTURES	
STRUCTURES	
3.1 115W Single Circuit Single Pole Angel OE	827,92
3.2 134W Single Circuit Single Pole Tangent	\$ 314,98
3.3	\$ 188,45
3.4	200).5
3.6	\$ -
3.7	\$ 42,31
3.8	\$ -
3.9	\$ -
3.10	\$ -
3.11	\$ -
3.12	\$ -
3.13	\$ -
3.14	\$ -
Sample	\$ -
TOTAL - STRUCTURES	\$ -
## CONDUCTOR, SHIELDWIRE, OPGW ## 1. 345kV - (1) 954kcmil 5477 ACSS "Cardinal"	\$ -
A. CONDUCTOR, SHIELDWIRE, OPGW	5 545,74
4.1 345kV-(1)954kcml 54/7 ACSS "Cardinal"	
4.2	\$ -
4.3	\$ -
4.5 Remove Existing 115kV Cable From Existing Structures	; \$ -
4.6 Remove Existing OPGW Cable - Mile S - S 12,000 S - S 12,000,00	\$ -
A.8	\$ -
4.9	\$ -
A.10 Rider Poles - Relocated - Set \$ - \$ - \$ 3,500 \$ - \$ 3,500.00	\$ -
A.11 Rider Poles	
S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR, FITTINGS, HARDWARE S. INSULATOR,	
S. INSULATOR, FITTINGS, HARDWARE S.1 345kV Tangent (1-Group of 18-Bells Each Assembly) S. 1,800 S. S. S. S. S. S. S.	•
5.1 345kV Tangent (1-Group of 18-Bells Each Assembly) - Assembly \$ 1,800 \$ - \$ 720 \$ - \$ 2,520 5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 18 Assembly \$ 900 \$ 16,200 \$ 560 \$ 10,080 \$ 1,460 5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) Assembly \$ 1,800 \$ - \$ 720 \$ - \$ 2,520 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 28 Assembly \$ 900 \$ 25,200 \$ 560 \$ 15,680 \$ 1,460 5.5 5 5 5 5 5 5 5 5 5 5 5 5 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,460 5 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500 \$ 1,500	\$ -
5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 18 Assembly \$ 900 \$ 16,200 \$ 560 \$ 10,080 \$ 1,460 5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) Assembly \$ 1,800 \$ - \$ 720 \$ - \$ 2,520 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 28 Assembly \$ 900 \$ 25,200 \$ 560 \$ 15,600 \$ 1,460 5.5 S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S </td <td>\$ -</td>	\$ -
5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) Assembly \$ 1,800 \$ - \$ 720 \$ - \$ 2,520 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 28 Assembly \$ 900 \$ 25,200 \$ 560 \$ 15,680 \$ 1,460 5.5 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -<	
5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 28 Assembly \$ 900 \$ 25,200 \$ 560 \$ 15,680 \$ 1,460 5.5 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ -
5.5 \$ \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	\$ 40,88
5.6 OPGW Assembly - Tangent 3 Assembly \$ 200 \$ 600 \$ 150 \$ 450 \$ 350 5.7 OPGW Assembly - Angle / DE 8 Assembly \$ 250 \$ 2,000 \$ 150 \$ 1,200 \$ 400 5.8 OHSW Assembly - Tangent - Assembly \$ 20 \$ - \$ 150 \$ - \$ 300 5.9 OHSW Assembly - Angle / DE - Assembly \$ 250 \$ - \$ 150 \$ - \$ 300 5.10 OPGW Splice Boxes - Set \$ 1,750 \$ - \$ 3,496	\$ -
5.7 OPGW Assembly - Angle / DE 8 Assembly \$ 250 \$ 2,000 \$ 150 \$ 1,200 \$ 400 5.8 OHSW Assembly - Tangent - Assembly \$ 200 \$ - \$ 150 \$ - \$ 350 5.9 OHSW Assembly - Angle / DE - Assembly \$ 250 \$ - \$ 150 \$ - \$ 400 5.10 OPGW Splice Boxes - Set \$ 1,750 \$ - \$ 1,746 \$ - \$ 3,496	\$ 1,05
5.8 OHSW Assembly - Tangent - Assembly \$ 200 \$ - \$ 150 \$ - \$ 350 5.9 OHSW Assembly - Angle / DE - Assembly \$ 250 \$ - \$ 150 \$ - \$ 400 5.10 OPGW Splice Boxes - Set \$ 1,750 \$ - \$ 1,746 \$ - \$ 3,496	\$ 3,20
5.10 OPGW Splice Boxes - Set \$ 1,750 \$ - \$ 1,746 \$ - \$ 3,496	\$ -
	\$ -
1 F 44 LODGING-II 0 T+	\$ -
5.11 OPGW Splice & Test - EA \$ 1,400 \$ - \$ 2,520 \$ - \$ 3,920	
	\$ -
5.13 Vibration Dampers - Conductor - EA \$ 35 \$ - \$ 35 \$ - \$ 70	
5.14 Shieldwire / OPGW Dampers, Misc. Fittings - EA \$ 27 \$ - \$ 35 \$ - \$ 62 5.15 Guys, Anchors, and Accessories - EA \$ 720 \$ - \$ 885 \$ - \$ 1,605	•
	\$ - \$ -
5.16 Misc. materials (Signs and Markers) - Mile \$ 770 \$ - \$ 1,006 \$ - \$ 1,776 \$ 5.17	-
5.18 5.19	
5.20	
	71,41
With the Confidence of Charles to Williams	1,881,92
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	
Contractor Mobilization / Demobilization	
6.1 Mob/Demob 1 LS \$ - \$ 18,819 \$ 18,819 \$ 18,819	\$ 18,81
Project Management, Material Handling & Amenities	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supp	ly Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 93,386	\$ 93,386	\$ 93,386	\$ 93,386
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 18,819	\$ 18,819	\$ 18,819	\$ 18,819
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 18,819	\$ 18,819	\$ 18,819	\$ 18,819
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 94,096	\$ 94,096	\$ 94,096	\$ 94,096
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 5,646	\$ 5,646	\$ 5,646	\$ 5,646
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 13,173	\$ 13,173	\$ 13,173	\$ 13,173
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 5,646	\$ 5,646	\$ 5,646	\$ 5,646
6.13	Real Estate Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$ 46,001	\$	46,001	\$ -	\$ -	\$ 46,001	\$ 46,001
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 1,882		\$ 1,882	\$ 1,882
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	46,001		\$ 273,787		\$ 319,787

Page 55 of 61 M. In. Churchtown SS

Estimate Revision: 5 Total: \$ 689,020

NG & NY Transco - To	019 - (Segment B)				
		Supply	- II	nstallation		Total
N. Interconnection Milan Station						
1. CLEARING & ACCESS	\$	-	\$	121,100	\$	121,100
2. FOUNDATIONS	\$	84,375	\$	135,279	\$	219,654
3. STRUCTURES	\$	130,328	\$	88,667	\$	218,994
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-
5. INSULATORS, FITTINGS, HARDWARE	\$	14,600	\$	9,040	\$	23,640
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	18,344	\$	87,288	\$	105,632
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	247,647	\$	441,373	\$	689,020
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	247.647	Ś	441.373	Ś	689.020

Description		\$ 247,047	\$ 441,373	\$ 669,020					
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Interd	onnection Milan Station								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	1.0	Acre	\$ -	\$ -	\$ 5,000	\$ 5,000		
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	500.0	LF	\$ -	\$ -	\$ 4	\$ 2,000	\$ 4	\$ 2,000
1.5	Matting - Access and ROW	500.0	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	525.0	LF	\$ -	\$ -	\$ 70	\$ 36,750	\$ 70	\$ 36,750
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	10,000.0	SF	\$ -	\$ -	\$ 4	\$ 35,200	\$ 4	\$ 35,200
1.10	Restoration for Work Pad areas	2,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 300	\$ 0	\$ 300
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEAF	ING & ACCESS				\$ -		\$ 121,100		\$ 121,100
2. FOUNDATIO	ONS								
2.1	Drilled Pier - 115kV Single Circuit Single Pole Angle/DE	2	EA	\$ 42,187	\$ 84,375	\$ 42,639	\$ 85,279	\$ 84,827	\$ 169,654
2.2									
2.3									
2.4									
2.5	Rock Excavation Adder	25	CY	\$ -	\$ -	\$ 2,000	\$ 50,000	\$ 2,000	\$ 50,000
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9 2.10					\$ - \$ -		\$ - \$ -		\$ - \$ -
2.10	I .			l	- ·	1	- د ا		

N. Interconnection Milan Station

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		\$ -
2.14					\$ -		\$ -		\$ -
2.15					\$ -		\$ -		\$ -
TOTAL - FOUND					\$ 84,375		\$ 135,279		\$ 219,654
3. STRUCTURES									
	115kV Single Circuit Single Pole Angle/DE	2	Structure	\$ 64,658	\$ 129,316	\$ 38,795	\$ 77,590	\$ 103,453	\$ 206,905
3.2									
3.3							4		-
3.4	In the II Construction and Construction Accessed	2	D-I-	\$ 506	\$ - \$ 1.012	\$ 5,539	\$ - \$ 11.077	ć C045	\$ - \$ 12,089
	Install Grounding and Grounding Accessories	2	Pole	\$ 506	· · · · · · · · · · · · · · · · · · ·	\$ 5,539	, , , , , , , , , , , , , , , , , , , ,	\$ 6,045	
3.6					\$ -		\$ - \$ -		\$ - \$ -
3.8					\$ -		·		\$ - \$ -
3.9					\$ -		\$ - \$ -		\$ -
3.10					\$ -		\$ -		-
3.10					\$ -		\$ -	+	\$ - \$ -
3.12					\$ -		\$ -	 	\$ -
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -	 	\$ - \$ -
									1.
3.15					\$ -		\$ -		\$ -
TOTAL - STRUC	TURES				\$ 130,328		\$ 88,667		\$ 218,994
4 CONDUCTOR	s, SHIELDWIRE, OPGW				,				-
	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35		\$ 5.00	\$ -	\$ 6.35	
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ 0.47		\$ 5.00	'	\$ 5.47	
	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$ -		\$ 30,000	\$ -	\$ 30,000.00	
4.6	Remove Existing OPGW Cable	-	Mile	\$ -	+	\$ 12,000	\$ -	\$ 12,000.00	
4.7	Remove Existing EH7	-	Mile	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000.00	
	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	· ·	\$ 5.00	'	\$ 6.90	
4.9	(-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-)	-	- -		*	7	*	,	*
	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
	Rider Poles	-	EA	\$ 1,750	\$ -	\$ 3,500		\$ 5,250.00	\$ -
TOTAL: CONDU	CTOR, SHIELDWIRE, OPGW:				\$ -	,	\$ -		\$ -
5. INSULATOR,	FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900	\$ -	\$ 560	\$ -	\$ 1,460	\$ -
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	14	Assembly	\$ 900	\$ 12,600	\$ 560	\$ 7,840	\$ 1,460	
5.5		-			\$ -		\$ -	\$ -	\$ -
	OPGW Assembly - Tangent	-	Assembly	\$ 200		\$ 150		\$ 350	
	OPGW Assembly - Angle / DE	4	Assembly	\$ 250		\$ 150	\$ 600		
	OHSW Assembly - Tangent	-	Assembly	\$ 200	+ '	\$ 150	\$ -	\$ 350	
	OHSW Assembly - Angle / DE	4	Assembly	\$ 250					
	OPGW Splice Boxes	-	Set	\$ 1,750		\$ 1,746	\$ -	\$ 3,496	
	OPGW Splice & Test	-	EA	\$ 1,400		\$ 2,520		\$ 3,920	
	Spacer - Conductor	-	EA		\$ -	\$ 35	\$ -	\$ 85	
	Vibration Dampers - Conductor	-	EA		\$ -	\$ 35			\$ -
	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA		\$ -				\$ -
	Guys, Anchors, and Accessories	-	EA	\$ 720	· ·	\$ 885	\$ -	\$ 1,605	
	Misc. materials (Signs and Markers)	-	Mile	\$ 770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$ -
5.17								1	
5.18									
5.19									
5.20									<u> </u>
TOTAL - INSULA	ATOR, FITTINGS, HARDWARE				\$ 14,600		\$ 9,040		\$ 23,640
N. Interc	onnection Milan Station				\$ 229,303		\$ 354,085		\$ 583,388
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
	Mob / Demob	1	LS	\$ -	\$ -	\$ 5,834	\$ 5,834	\$ 5,834	\$ 5,834
	Project Management, Material Handling & Amenities	1	L3		-	5,034	5,034	5,034	5,034
	roject management, material nationing & Americas			I	1	l .		1	1

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	e N	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 28,949	\$ 28,949	\$ 28,949	\$ 28,949
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 5,834	\$ 5,834	\$ 5,834	\$ 5,834
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 5,834	\$ 5,834	\$ 5,834	\$ 5,834
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 29,169	\$ 29,169	\$ 29,169	\$ 29,169
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 1,750	\$ 1,750	\$ 1,750	\$ 1,750
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 4,084	\$ 4,084	\$ 4,084	\$ 4,084
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 1,750	\$ 1,750	\$ 1,750	\$ 1,750
6.13	Real Estate Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$ 18,34	4 \$	18,344	\$ -	\$ -	\$ 18,344	18,344
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 583		\$ 583	\$ 583
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	18,344		\$ 87,288		\$ 105,632

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O. System Upgrade Facilities (Cricket Valley to Long Mt. Line)

Estimate 4 Revision:

Total: \$ 3,155,160

SYSTEM UPGI	SYSTEM UPGRADE FACILITIES		Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF 1	Transmission Line Upgrade Cricket Valley - Connecticut Border to Long Mountain (3.3 + 6.0 = 9.3 Miles)								
1.1	345kV - (1) 954kcmil 45/7 ACSS "Rail" Conductor (Cricket Vly to Conn Border)	109,771.20	LF	\$ 2.50	\$ 274,428	\$ 5.00	\$ 548,856	\$ 8	\$ 823,284
1.2	345kV - (1) 2312kcmil 76/19 ACSS "Thrasher" Conductor (Conn Border to Long Mtn.)	99,792.00	LF	\$ 8.00	\$ 798,336	\$ 5.00	\$ 498,960	\$ 13	\$ 1,297,296
1.3	Remove Existing 795 ACSS Conductor and Accessories (Cricket VIy to Conn Border)	3.30	Mile	\$ -	\$ -	\$ 30,000.00	\$ 99,000	\$ 30,000	\$ 99,000
1.4	Remove Existing 2156kmil ACSS Conductor and Accessories (Conn Border to Long Mtn.)	6.00	Mile	\$ -	\$ -	\$ 30,000.00	\$ 180,000	\$ 30,000	\$ 180,000
1.5	Rider Poles	10.00	Sets	\$ 1,750.00	\$ 17,500	\$ 3,500.00	\$ 35,000	\$ 5,250	\$ 52,500
1.6	345kV Vertical Tangent Insulator Assembly	147.00	Assembly	\$ 1,800.00	\$ 264,600	\$ 720.00	\$ 105,840	\$ 2,520	\$ 370,440
1.7	345kV Deadend Insulator Assembly	132.00	Assembly	\$ 1,800.00	\$ 237,600	\$ 720.00	\$ 95,040	\$ 2,520	\$ 332,640
	Subtotal SUG 1 Direct Cost		-		\$ 1,592,464		\$ 1,562,696		\$ 3,155,160
2	Indirect Cost (25% of Direct Cost)				\$ 398,116		\$ 390,674		\$ 788,790
	TOTAL:				\$ 1,990,580		\$ 1,953,370		\$ 3,943,950

System Upgrade Facilities (Various Stations for Knickerbocker to Pleasant Valley

Estimate Revision: 4 Total: \$ 774,000

SYSTEM UPGF	ADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF SS1	Replace Disconnect Switch and Wavetrap on Roseton to East Fishkill #305 345kV Line	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 222,449	\$ 223,000
SUF SS1	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 33,480	\$ 34,000
SUF SS1	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 65,000
SUF SS1	SUF SS1 - TOTAL:				\$ -		\$ -		\$ 322,000
SUF SS2	Replace Line Trap, 3" Bus Tue, Switches 277 & 288, and 3.5" bus Tube at New Scotland	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 451,817	\$ 452,000
SUF SS2	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 64,200	\$ 65,000
SUF SS2	Engineering, T&C, PM, Indirects (15%)		LS %						\$ 130,000
SUF SS2	SUFSS 2 - TOTAL:				\$ -		\$ -		\$ 647,000
SUF SS3		1	LS					\$ -	\$ -
SUF SS3	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS3	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS3	SUF SS3 - TOTAL:				\$ -		\$ -		\$ -
SUF SS4		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS4	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS4	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS4	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
SUF SS5		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS5	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS5	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS5	SUF SS5 - TOTAL:				\$ -		\$ -		\$ -
	STATIONS SUF DIRECT TOTAL:								\$ 774,000
	STATIONS SUF INDIRECT TOTAL:								\$ 195,000
	STATIONS SUF TOTAL								\$ 969,000

ESTIMATE ASSUMPTIONS & CLARIFICATIONS

- 1 Cost Estimate is based on 2017 rates.
- Construction schedule is in accordance with proposed schedule we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
- 3 We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
- 4 All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
- We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type. 20% of the total length of the line is assumed to use Type 1 Gravel road and 80% of the line length access to be used wood matting. In addition 75 feet of wood matting is included from the access matting to the work pad area matting. The estimate also include 5,000 square feet of wood matting for each structure work area within the ROW. For the ground restoration (seed, straw and woven mat), 20% of the work pad area included.
- Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
- Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
- 8 Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
- 9 A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
- 10 We have assumed that all project details provided are accurate unless noted otherwise.
- 11 Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
- 12 A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
- A contractor allowance of 4.315% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
- An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
- 15 A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
- 16 An allowance of 5% for transmission design and engineering has been included in the total section.
- 17 An allowance of 8% for substation design and engineering has been included in the total section.
- 18 An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
- 19 An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
- 20 An allowance of 3.75% for substation testing and commissioning has been included in the total section.
- An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
- New York state sales tax of 8% is included in all material pricing.
- 23 An allowance of 1.5% for insurance is included in the DPS sheet.
- 24 Knickerbocker to Churchtown substation; 0.4 miles of 345kV conductor from the junction have been added.
- 25 An additional Quantity of 5% have been added to conductors, OPGW, & OHSW for sag and jumpers.
- Rock excavation depth in Foundation data provided in the proposal.
 - Cricket Valley to Long Mountain line upgrade: The length of the re-conductor between Cricket Valley and the NY/CT border is 3.3 miles and will remove the existing (to be installed on CV project) 2 bundle 795 ACSS conductor and install new 2 bundle Rail 954 ACSS conductor.
 - -The length of the re-conductor between the NY/CT border and Long Mountain is 6 miles and will remove the existing single 2156 ACSS conductor and install new single Thrasher 2312
- 27 ACSS conductor.
 - -The Insulators and associated conductor hardware will be replaced.
 - -The existing structures are assumed to have adequate strength to support the new conductors.
 - -The estimate is a rough order of magnitude estimate as no engineering was performed and SECo did not have access to record drawings.
- 28 The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.



		NextEra Energy (T022)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$33,783
	1.2	Foundations	\$17,271
	1.3	Structures	\$58,961
	1.4	Conductor, Shiedwire and OPGW	\$25,925
	1.5	Insulators, Fitting and Hardwares	\$9,609
		Subtotal (1)	\$145,550
#	2	Substations	
Direct Cost	2.1	Knickerbocker Substation	\$15,110
rect	2.2	East Greenbush Substation	\$61
՝	2.3	Schodack Substation	\$0
	2.4	Churchtown Substation	\$14,897
	2.5	Pleasant Valley Substation	\$2,798
	2.6	Substation Interconnections	\$7,272
		Subtotal (2)	\$40,138
		Total (1+2)	\$185,688
		Contractors Mark-up (15% of Total 1+2)	\$27,853
		Total Direct Cost (A)	\$213,542
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$1,857
st	3.2	Project Management, Material Handling & Amenities	\$15,258
Indirect Cost	3.3	Engineering	\$12,281
direc	3.4	Testing & Commissioning	\$920
luc	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$10,584
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628
		Total Indirect Cost (3)	\$48,528
		Subtotal Project Cost (B=A+3) 2017 \$	\$262,069
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project	\$0
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417
	•	Subtotal NUF Cost (C)	\$4,417
		Total Project Cost (B+C) 2017 \$	\$266,486
_		Total Project Cost 2018 \$	\$274,481

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NextEra T022 (Segment B)

Estimate Revision: 5

	NextEra T022 (Segment B) - Direct Costs		Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Knickerbocker to Churchtown	\$	59,622,815
Direct Labor, Material & Equipment Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	81,180,952
Direct Labor, Material & Equipment Costs	C. Blue Stores Junction to Blue Stores Substation	\$	4,746,361
Direct Labor, Material & Equipment Costs	D. Knickerbocker 345kV Substation - Install	\$	15,109,913
Direct Labor, Material & Equipment Costs	E.Greenbush Substation Removal	\$	61,200
Direct Labor, Material & Equipment Costs	F.	\$	-
Direct Labor, Material & Equipment Costs	G.	\$	-
Direct Labor, Material & Equipment Costs	H. North Churchtown Substation - Install	\$	14,897,294
Direct Labor, Material & Equipment Costs	l.	\$	-
Direct Labor, Material & Equipment Costs	J. Pleasant Valley Substation - Install	\$	2,797,952
Direct Labor, Material & Equipment Costs	K.	\$	-
Direct Labor, Material & Equipment Costs	L. Interconnection Knickerbocker Station	\$	1,534,845
Direct Labor, Material & Equipment Costs	M. Interconnection Churchtown Station	\$	5,113,541
Direct Labor, Material & Equipment Costs	N. Interconnection Milan Station	\$	623,428
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Cricket Valley Line Upgrade)	\$	3,155,160
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations Knickerbocker to Pleasant Valley)	\$	-
	S	SUBTOTAL: \$	188,843,462
	CONTRACTOR MARK-	JP (OH&P) \$	28,326,519
	CONTINGENCY ON ENTIR	E PROJECT \$	-
	TOTA	L DIRECT: \$	217,169,981

	NextEra T022 (Segment B) - Indirect Costs	Total	Each Segment
Indirect Costs	A. Transmission Line Knickerbocker to Churchtown	\$	13,205,227
Indirect Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	16,851,396
Indirect Costs	C. Blue Stores Junction to Blue Stores Substation	\$	1,003,285
Indirect Costs	D. Knickerbocker 345kV Substation - Install	\$	4,008,194
Indirect Costs	E.Greenbush Substation Removal	\$	11,210
Indirect Costs	F.	\$	-
Indirect Costs	G.	\$	-
Indirect Costs	H. North Churchtown Substation - Install	\$	3,698,349
Indirect Costs	I.	\$	-
Indirect Costs	J. Pleasant Valley Substation - Install	\$	728,283
Indirect Costs	K. Pleasant Valley Substation - Removal	\$	-
Indirect Costs	L. Interconnection Knickerbocker Station	\$	292,045
Indirect Costs	M. Interconnection Churchtown Station	\$	980,289
Indirect Costs	N. Interconnection Milan Station	\$	121,652
Indirect Costs	O. System Upgrade Facilities (Cricket Valley Line Upgrade)	\$	788,790
Indirect Costs	P. System Upgrade Facilities (Various Stations Knickerbocker to Pleasant Valley)	\$	-
Indirect Costs	Legal, Permitting, and Environmental Fees	\$	7,627,609
	TOTAL INDI	RECT: \$	49,316,330

Page 2 of 42
Direct & Indirect Totals

TOTAL ESTIMATED COST: \$

266,486,311

A. Transmission Line Knickerbocker to Churchtown

NextEra T022 (Segment B)

Estimate Revision:

5

Total: \$ 72,828,042

NextEra TO22 (Segment B)						
		Supply		Installation		Total
A. Transmission Line Knickerbocker to Churchtown						
1. CLEARING & ACCESS	\$	11,500	\$	13,043,953	\$	13,055,453
2. FOUNDATIONS	\$	1,519,868	\$	4,432,528	\$	5,952,396
3. STRUCTURES	\$	4,990,679	\$	19,604,107	\$	24,594,786
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	2,943,787	\$	8,681,855	\$	11,625,642
5. INSULATORS, FITTINGS, HARDWARE	\$	2,896,560	\$	1,497,978	\$	4,394,539
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	988,992	\$	12,216,235	\$	13,205,227
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	13,351,386	\$	59,476,656	\$	72,828,042
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	13.351.386	Ś	59.476.656	Ś	72.828.042

Item	ltem Description	Estimated Quantity	Unit of Measure	Mat	erial Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
A. Transı	mission Line Knickerbocker to Churchtown										
1. CLEARING &	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	10.0	Acre	\$	-	\$ -	\$ 15,000	\$ 150,000	\$ 15,000	\$	150,000
1.2	Clearing the ROW - Light (mowing)	55.0	Acre			\$ -	\$ 5,000	\$ 275,000	\$ 5,000	\$	275,000
1.3	Permanent Access Road	23,126	LF	\$	-	\$ -	\$ 45.00			\$	1,040,688
	Silt Fence	115,632	LF	\$	-	\$ -	\$ 4.00			\$	462,528
	Matting - Access and ROW	92,506	LF	\$	-	\$ -	\$ 70.00				6,475,392
1.6	Matting - To Work Area	11,925	LF	\$	-	\$ -	\$ 70.00				834,750
1.7	Snow Removal	21.9	Mile	\$	-	\$ -	\$ 16,000				350,400
	ROW Restoration	21.9	Mile	\$	-	\$ -	\$ 10,000				219,000
1.9	Work Pads	795,000	SF	\$	-	\$ -	\$ 3.52			\$	2,798,400
1.10	Restoration for Work Pad areas	159,000	SF	\$	-	\$ -	\$ 0.15			\$	23,850
1.11	Temporary Access Bridge	9	EA	\$	-	\$ -	\$ 20,035	\$ 180,315			180,315
	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445		-
1.13	Stabilized Construction Entrance	4	EA	\$		\$ -	\$ 4,580	\$ 18,320	\$ 4,580	\$	18,320
1.14	Maintenance and Protection of Traffic on Public Roads	47	EA	\$	-	\$ -	\$ 4,130	\$ 194,110	\$ 4,130	\$	194,110
1.15	Culverts / Misc. Access	10	EA	\$	750	\$ 7,500	\$ 1,250	\$ 12,500	\$ 2,000	\$	20,000
1.16	Gates	2	EA	\$	2,000	\$ 4,000	\$ 2,500	\$ 5,000	\$ 4,500	\$	9,000
1.17	Concrete Washout Station	2	EA	\$	-	\$ -	\$ 1,850	\$ 3,700	\$ 1,850	\$	3,700
TOTAL - CLEAR	ING & ACCESS:					\$ 11,500		\$ 13,043,953		\$	13,055,453
2. FOUNDATIO	NS										, ,
2.1	Drilled Pier - 115/345KV D/C DEADEND, STEEL	13	EA	\$	86,969	\$ 1,130,593	\$ 87,900	\$ 1,142,702	\$ 174,869	\$	2,273,295
2.2	Drilled Pier - 345KV S/C DEADEND, STEEL	1	EA	\$	39,770	\$ 39,770	\$ 40,196	\$ 40,196	\$ 79,966	\$	79,966
2.3	Direct Embed - 115/345KV D/C TANGENT, CONCRETE	145	EA	\$	2,410	\$ 349,504	\$ 16,391	\$ 2,376,630	\$ 18,801	\$	2,726,134
2.4	Rock Excavation Adder	436.5	СУ	\$	-	\$ -	\$ 2,000	\$ 873,000	\$ 2,000	\$	873,000
2.5											
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Su	pply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	тот	TAL
2.13											
2.14											
2.15											
2.16											
2.17											
2.18											
TOTAL - FOUN	DATIONS:					\$ 1,519,868		\$ 4,432,528		\$	5,952,396
3. STRUCTURE	S					, ,, ,,,,,,		, , , , , ,		•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	115/345KV D/C DEADEND, STEEL	13	Structure	\$	131,581	\$ 1,710,556	\$ 78,949	\$ 1,026,334	\$ 210,530	Ś	2,736,890
3.2	345KV S/C DEADEND, STEEL	1	Structure	\$	51,800		\$ 31,080	\$ 31,080		\$	82,880
3.3	115/345KV D/C TANGENT, CONCRETE	145	Structure	\$	21,709						16,427,940
				1		7 5,2 11,000	+	7 20,200,012	7 ===,===	· -	.,,.
3.4	Remove Existing Concrete Foundation	688	EA	\$		\$ -	\$ 3,250	\$ 2,236,000		\$	2,236,000
3.5	Remove Existing Structure and Accessories	172	EA	\$		\$ -	\$ 12,500	\$ 2,150,000			2,150,000
3.6	Install Grounding and Grounding Accessories	159	Pole	\$	506	\$ 80,454	\$ 5,539	\$ 880,622	\$ 6,045	\$	961,076
3.7											
3.8											
3.9											
3.10											
3.11											
3.12											
3.13											
3.14											
3.15					$\overline{}$						
TOTAL - STRUC	L CTURES:					\$ 4,990,679		\$ 19,604,107		\$ 2	24,594,786
	R, SHIELDWIRE, OPGW					ψ 1,550,675		23,001,107		-	.,55 .,766
4.1	345kV - (1) 1,033kcmil 54/7 ACSS "Curlew"	728,482	LF	\$	2.82	\$ 2,054,319	\$ 5.00	\$ 3,642,410	\$ 7.82	\$	5,696,729
4.2	(1) OPGW 36 Fiber AC-33/38/571	121,414	LF	\$	1.35		\$ 5.00			\$	770,979
4.3	(1) 3/8" EHS7 Steel	121,414	LF	\$	0.47		\$ 5.00	\$ 607,070		\$	664,135
4.4	Remove Existing Cable From Existing Structures	43.8	Mile	\$		\$ -	\$ 30,000	\$ 1,314,000			1,314,000
4.5	Remove Existing OPGW Cable and Accessories	21.9	Mile	Ś		\$ -	\$ 12,000	\$ 262,800		\$	262,800
4.6	Remove Existing OHSW and Accessories	21.9	Mile	Ś		\$ -	\$ 12,000	\$ 262,800		\$	262,800
4.7	115kV - (1) 795kcmil 26/7 ACSS "Drake"	364,241	LF	\$	1.72		\$ 5.00	\$ 1,821,205			2,447,700
4.8	Rider Poles (47 Locations)	24	Set	Ś	1,750		\$ 3,500		\$ 5,250.00	\$	126,000
4.9	Rider Poles - Relocated	23	Set	Ś		\$ -	\$ 3,500		\$ 3,500.00	\$	80,500
4.10	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	25	560	, , , , , , , , , , , , , , , , , , ,		Ť	y 3,500	у 30,300	ý 3,500.00	·	00,000
4.11											
4.12					$\overline{}$						
4.13											
4.14											
4.15											
4.16											
4.17											
	UCTOR, SHIELDWIRE, OPGW:					\$ 2,943,787		\$ 8,681,855		\$ 1	1,625,642
	, FITTINGS, HARDWARE										, , , , , , ,
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	725	Assembly	\$	1,800	\$ 1,305,000	\$ 720	\$ 522,000	\$ 2,520	\$	1,827,000
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	870	Assembly	\$	900						1,270,200
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	210	Assembly	\$	1,800						529,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	91	Assembly	\$	900						132,860
5.5	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	31		<u> </u>		\$ -	. 300	\$ -			-
	Angle - V-String (1-Group of 18-Bells Each Assembly)		Assembly	\$	1,800		\$ 720				-
	H-Frame - Tangent Insulators (4-Assemblies Each Structure (2-Groups of 18-Bells Each										
5.7	Assembly))		Assembly	\$	3,600		\$ 1,440		\$ 5,040		-
	I	1	A le le .	1.4	200	1 0 000	ć 4F0	24.750	A 250	<u> </u>	50,750
5.8	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	145	Assembly Assembly	\$	200 250						11,200

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
5.10	OHSW Assembly - Tangent	145	Assembly	\$ 200	\$ 29,000	\$ 150	\$ 21,750	\$ 350	\$ 50,750
5.11	OHSW Assembly - Angle / DE	28	Assembly	\$ 250	\$ 7,000	\$ 150	\$ 4,200	\$ 400	\$ 11,200
5.12	OPGW Splice Boxes	8	Set	\$ 1,746	\$ 13,969	\$ 2,274	\$ 18,192	\$ 4,020	\$ 32,161
5.13	OPGW Splice & Test	8	EA	\$ 2,520	\$ 20,160	\$ 2,520	\$ 20,160	\$ 5,040	\$ 40,320
5.14	Spacer - Conductor	3,659	EA	\$ 50	\$ 182,950	\$ 35	\$ 128,065	\$ 85	\$ 311,015
5.15	Vibration Dampers - Conductor	878	EA	\$ 35	\$ 30,730	\$ 35	\$ 30,730	\$ 70	\$ 61,460
5.16	Shield wire / OPGW Dampers, Misc. Fittings	444	EA	\$ 27	\$ 11,988	\$ 35	\$ 15,540	\$ 62	\$ 27,528
5.17									
5.18									
5.19									
5.20									
5.21	Guys, Anchors, and Accessories	-	EA	\$ 720	\$ -	\$ 885	\$ -	\$ 1,605	\$ -
5.22	Misc. materials (Signs and Markers)	21.9	Mile	\$ 770	\$ 16,863	\$ 1,006	\$ 22,031	\$ 1,776	\$ 38,894
5.23				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:				\$ 2,896,560		\$ 1,497,978		\$ 4,394,539
Δ. Trans	mission Line Knickerbocker to Churchtown				\$ 12,362,395		\$ 47,260,421		\$ 59,622,815
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , , , ,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6. IVIOB/ DEIVIO	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 596,228	\$ 596,228	\$ 596,228	\$ 596,228
0.1	Project Management, Material Handling & Amenities	1	LS	-	, -	\$ 590,228	\$ 590,228	\$ 590,228	\$ 590,228
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 3,706,691	\$ 3,706,691	\$ 3,706,691	\$ 3,706,691
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 596,228	\$ 596,228	\$ 596,228	\$ 596,228
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 596,228	\$ 596,228	\$ 596,228	\$ 596,228
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 2,981,141	\$ 2,981,141	\$ 2,981,141	\$ 2,981,141
6.6	Lidar	1	LS	\$ -	\$ -	\$ 178,868	\$ 178,868	\$ 178,868	
6.7	Geotech	22	Location	\$ -	\$ -	\$ 3,500	\$ 77,000		\$ 77,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 417,360	\$ 417,360	\$ 417,360	\$ 417,360
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 178,868	\$ 178,868	\$ 178,868	\$ 178,868
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 2,788,000	\$ 2,788,000	\$ 2,788,000	\$ 2,788,000
6.15	Legal Fees	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 988,992	\$ 988,992	\$ -	\$ -	\$ 988,992	\$ 988,992
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 59,623	\$ 59,623	\$ 59,623	\$ 59,623
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 988,992		\$ 12,216,235		\$ 13,205,227

NextEra T022 (Segment B) B. Transmission Line Churchtown to Pleasant Valley

Estimate Revision: 5 Total: \$ 98,032,348

NextEra T022 (Segment B)												
	Supply			Installation		Total						
B. Transmission Line Churchtown to Pleasant Valley												
1. CLEARING & ACCESS	\$	14,000	\$	19,309,466	\$	19,323,466						
2. FOUNDATIONS	\$	1,106,161	\$	9,049,991	\$	10,156,152						
3. STRUCTURES	\$	5,447,370	\$	27,375,569	\$	32,822,939						
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,493,383	\$	10,334,110	\$	13,827,493						
5. INSULATORS, FITTINGS, HARDWARE	\$	3,450,934	\$	1,599,968	\$	5,050,903						
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,080,948	\$	15,770,448	\$	16,851,396						
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-						
SUBTOTAL:	\$	14,592,796	\$	83,439,552	\$	98,032,348						
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-						
TOTAL:	\$	14,592,796	\$	83,439,552	\$	98,032,348						

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Trans	mission Line Churchtown to Pleasant Valley								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	63.0	Acre	\$ -	\$ -	\$ 5,000	\$ 315,000	\$ 5,000	\$ 315,000
1.3	Permanent Access Road	34,108.8	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	170,544.0	LF	\$ -	\$ -	\$ 4			
1.5	Matting - Access and ROW	136,435.2	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	18,450.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	32.3	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	32.3	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	1,230,000.0	SF	\$ -	\$ -	\$ 4			\$ 4,329,600
1.10	Restoration for Work Pad areas	246,000.0	SF	\$ -	\$ -	\$ 0.2			\$ 36,900
1.11	Temporary Access Bridge	14	EA	\$ -	\$ -	\$ 20,035			
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	12	EA	\$ -	\$ -	\$ 4,580			
1.14	Maintenance and Protection of Traffic on Public Roads	86	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	4	EA	\$ 2,000	\$ 8,000	\$ 2,500			
1.16	Culverts / Misc. Access	8	EA	\$ 750		\$ 1,250			
1.17	Concrete Washout Station	10	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
	RING & ACCESS:				\$ 14,000		\$ 19,309,466		\$ 19,323,466
2. FOUNDATION	DNS								
2.1	Drilled Pier - 345KV S/C DEADEND, STEEL	17	EA	\$ 43,731	\$ 743,425	\$ 44,199	\$ 751,387	\$ 87,930	\$ 1,494,811
2.2	Direct Embed - 345KV S/C TANGENT, CONCRETE	229	EA	\$ 1,584	\$ 362,736	\$ 10,771	\$ 2,466,605	\$ 12,355	\$ 2,829,341
2.3									
2.4									
2.5	Rock Excavation Adder	2,916.0	СҮ	\$ -	\$ -	\$ 2,000	\$ 5,832,000	\$ 2,000	\$ 5,832,000
2.6									
2.7									
2.8									
2.9									
2.10									
-									
2.11									
2.12									
TOTAL - FOUN	DATIONS:				\$ 1,106,161		\$ 9,049,991		\$ 10,156,152

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3. STRUCTURE	S								
3.1	345KV S/C DEADEND, STEEL	17	Structure	\$ 49,950	\$ 849,150	\$ 29,970	\$ 509,490	\$ 79,920	\$ 1,358,640
3.2	345KV S/C TANGENT, CONCRETE	229	Structure	\$ 19,536	\$ 4,473,744	\$ 82,418	\$ 18,873,608	\$ 101,954	\$ 23,347,352
3.3									
3.4									
3.5									
3.6									
3.7									
3.8									
3.9									
3.10									
3.11									
3.12	Remove Existing Foundation	1,040	EA	\$ -	\$ -	\$ 3,250	\$ 3,380,000	\$ 3,250	\$ 3,380,000
3.13	Remove Existing Structure and Accessories	260	EA	\$ -	\$ -	\$ 12,500	\$ 3,250,000	\$ 12,500	\$ 3,250,000
3.14	Install Grounding and Grounding Accessories	246	Structure	\$ 500	<u>'</u>				
3.15		2.0			. ==1,	. 3,333	,,	. 2,0 13	
3.16									
3.17									
TOTAL - STRUC	TURES PRINCTOWN TO NEW SCOTLAND:				\$ 5,447,370		\$ 27,375,569		\$ 32,822,939
4. CONDUCTO	R, SHIELDWIRE, OPGW								
4.1	345kV - (1) 1,033kcmil 54/7 ACSS "Curlew"	1,094,386	LF	\$ 2.83				\$ 7.82	
4.2	(1) OPGW 36 Fiber AC-33/38/571	182,398	LF.	\$ 1.35				\$ 6.35	
4.3	(1) 3/8" EHS7 Steel	182,398	LF Nail-	\$ 0.4					
4.5	Remove Existing 115kV Cable From Existing Structures	65.2	Mile	\$ - \$ -	\$ -	\$ 30,000 \$ 12,000		\$ 30,000.00	
4.6	Remove Existing OPGW Cable and Accessories	32.6 32.6	Mile Mile	\$ - \$ -	\$ - \$ -	\$ 12,000 \$ 12,000		\$ 12,000.00 \$ 12,000.00	
4.7	Remove Existing OHSW and Accessories	32.0	LF	\$ 1.7	*	\$ 12,000		\$ 12,000.00 \$ 6.72	· · · · · · · · · · · · · · · · · · ·
4.8	115kV - (1) 795kcmil 26/7 ACSS "Drake"	-	LF	\$ 1.7.	-	\$ 5.00	, -	\$ 0.72	-
4.10	Rider Poles - Relocated	43	Set	\$ -	\$ -	\$ 3,500	\$ 150,500	\$ 3,500.00	\$ 150,500
4.11	Rider Poles (86 Total)	43	EA	\$ 1,75	*				\$ 225,750
	UCTOR, SHIELDWIRE, OPGW:	.5		2,75	\$ 3,493,383	3,300	\$ 10,334,110	3,230.00	\$ 13,827,493
	, FITTINGS, HARDWARE				, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, ,,,,,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,374	Assembly	\$ 1,800	\$ 2,473,200	\$ 720	\$ 989,280	\$ 2,520	\$ 3,462,480
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900	\$ -	\$ 560	\$ -	\$ 1,460	\$ -
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	255	Assembly	\$ 1,800	\$ 459,000	\$ 720	\$ 183,600	\$ 2,520	\$ 642,600
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900	\$ -	\$ 560	\$ -	\$ 1,460	\$ -
5.5	OPGW Assembly - Tangent	229	Assembly	\$ 200	\$ 45,800	\$ 150	\$ 34,350	\$ 350	\$ 80,150
5.6	OPGW Assembly - Angle / DE	34	Assembly	\$ 250					\$ 13,600
5.7	OHSW Assembly - Tangent	229	Assembly	\$ 200					
5.8	OHSW Assembly - Angle / DE	34	Assembly	\$ 250					\$ 13,600
5.9	OPGW Splice Boxes	12	Set	\$ 1,746					\$ 48,242
5.10	OPGW Splice & Test	12	EA	\$ 2,520					\$ 60,480
5.11	Spacer - Conductor	5,414	EA	\$ 50				·	\$ 460,190
5.12	Vibration Dampers - Conductor	1,299	EA	\$ 35				-	\$ 90,930
5.13	Shieldwire / OPGW Dampers, Misc. Fittings	656	EA	\$ 27					\$ 40,672
5.14	Guys, Anchors, and Accessories	-	EA	\$ 720		\$ 885			\$ -
5.15	Misc. materials (Signs and Markers) ATORS, FITTINGS, HARDWARE:	32.6	Mile	\$ 770				\$ 1,776	
B. Transı	mission Line Churchtown to Pleasant Valley				\$ 3,450,934 \$ 13,511,848		\$ 1,599,968 \$ 67,669,104		\$ 5,050,903 \$ 81,180,952
6. MOB/DEMC	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS								
	Contractor Mobilization / Demobilization				1.				
6.1	Mob / Demob Project Management, Material Handling & Amenities	1	LS	\$ -	\$ -	\$ 811,810	\$ 811,810	\$ 811,810	\$ 811,810
	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost				+				
6.2		1	LS			\$ 5,046,939	\$ 5,046,939	\$ 5,046,939	\$ 5,046,939
0.2	Manager, SHEQ Staff, and Admin Staff)								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 811,810	\$ 811,810	\$ 811,810	\$ 811,810
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 4,059,048	\$ 4,059,048	\$ 4,059,048	\$ 4,059,048
6.6	Lidar	1	LS	\$ -	\$ -	\$ 243,543	\$ 243,543	\$ 243,543	\$ 243,543
6.7	Geotech	33	Location	\$ -	\$ -	\$ 3,500	\$ 115,500	\$ 3,500	\$ 115,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 568,267	\$ 568,267	\$ 568,267	\$ 568,267
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 243,543	\$ 243,543	\$ 243,543	\$ 243,543
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 2,937,000	\$ 2,937,000	\$ 2,937,000	\$ 2,937,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 1,080,948	\$ 1,080,948	\$ -	\$ -	\$ 1,080,948	\$ 1,080,948
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 81,181	\$ 81,181	\$ 81,181	\$ 81,181
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,080,948		\$ 15,770,448		\$ 16,851,396

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B. TL Churchtown-Pleasant

NextEra T022 (Segment B)

C. Blue Stores Junction to Blue Stores Substation

Estimate Revision: 5 Total: \$ 5,749,646

NextEra T022 (Segi	ment B)			
		Supply	Installation	Total
C. Blue Stores Junction to Blue Stores Substation				
1. CLEARING & ACCESS	\$	-	\$ 1,404,512	\$ 1,404,512
2. FOUNDATIONS	\$	236,848	\$ 925,954	\$ 1,162,802
3. STRUCTURES	\$	596,484	\$ 946,665	\$ 1,543,149
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	84,763	\$ 387,095	\$ 471,858
5. INSULATORS, FITTINGS, HARDWARE	\$	107,544	\$ 56,496	\$ 164,040
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	82,051	\$ 921,234	\$ 1,003,285
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,107,690	\$ 4,641,956	\$ 5,749,646
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL	ć	1 107 690	\$ 4.641.956	\$ 5.749.646

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Description	of Work:	3 1,107,030	3 4,041,530	3,743,040					
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Blue S	Stores Junction to Blue Stores Substation								
1. CLEARING 8	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	4.0	Acre	\$ -	\$ -	\$ 5,000	\$ 20,000		
1.3	Permanent Access Road	2,217.6	LF	\$ -	\$ -	\$ 45			\$ 99,792
1.4	Silt Fence	11,088.0	LF	\$ -	\$ -	\$ 4			\$ 44,352
1.5	Matting - Access and ROW	8,870.4	LF	\$ -	\$ -	\$ 70			\$ 620,928
1.6	Matting - To Work Area	1,800.0	LF	\$ -	\$ -	\$ 70			\$ 126,000
1.7	Snow Removal	2.1	Mile	\$ -	\$ -	\$ 16,000	\$ 33,600		
1.8	ROW Restoration	2.1	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	120,000.0	SF	\$ -	\$ -	\$ 4			\$ 422,400
1.10	Restoration for Work Pad areas	24,000.0	SF	\$ -	\$ -	\$ 0.2			\$ 3,600
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	1		\$ -	\$ -	\$ 4,580			
1.14	Maintenance and Protection of Traffic on Public Roads	2		\$ -	\$ -	\$ 4,130	\$ 8,260		
1.15	Gates	-	EA	\$ 2,000		\$ 2,500	\$ -	\$ 4,500	
1.16	Culverts / Misc. Access	-	EA	\$ 750		\$ 1,250	\$ -	\$ 2,000	
1.17	Concrete Washout Station	-	EA	\$ -	\$ -	\$ 1,850	\$ -	\$ 1,850	
	RING & ACCESS:				\$ -		\$ 1,404,512		\$ 1,404,512
2. FOUNDATIO	ONS T								
2.1	Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE	6	EA	\$ 31,225	\$ 187,348	\$ 31,559	\$ 189,354	\$ 62,784	\$ 376,702
2.2	Direct Embed - 115kV Single Circuit H- Pole Tangent	18	EA	\$ 2,750	\$ 49,500	\$ 18,700	\$ 336,600	\$ 21,450	\$ 386,100
2.3	Rock Excavation Adder	200.0	СУ	\$ -	\$ -	\$ 2,000	\$ 400,000	\$ 2,000	\$ 400,000
2.4									
2.5									
2.6									
2.7									
2.8									
2.9									
2.10									
2.11									
2.12									
2.13									

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.14										
2.15	DATIONS									
TOTAL - FOUN 3. STRUCTURE					\$ 236,848		\$ 925,954		\$	1,162,802
3.1	115kV Single Circuit H- Pole Angle/ DE	6	Structure	\$ 39,822	\$ 238,929	\$ 23,893	\$ 143,358	\$ 63,714	\$	382,287
3.2	115kV Single Circuit H- Pole Angler DE	18		\$ 18,515	\$ 333,266	\$ 23,833	\$ 199,960			533,226
										333,223
3.3	Remove Existing Structure and Accessories	-	EA	\$ -	\$ -	\$ 7,500	\$ -	\$ 7,500	\$	-
3.4	Install Grounding and Grounding Accessories	27	EA	\$ -	\$ -	\$ 12,500	\$ 337,500	\$ 12,500	\$	337,500
3.5										
3.6	Install Grounding and Grounding Accessories	48	Structure	\$ 506	\$ 24,288	\$ 5,539	\$ 265,848	\$ 6,045	\$	290,136
3.7										
3.8										
3.10										
3.11										
3.12										-
3.13										
3.14										
3.15										
TOTAL - STRUC					\$ 596,484		\$ 946,665		\$	1,543,149
	R, SHIELDWIRE, OPGW				_		4			
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 3.53	\$ -	\$ 5.00	\$ -	\$ 8.53	\$	-
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.55	\$ -	\$ 5.00	\$ -	\$ 6.55	\$	-
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ 0.72	\$ -	\$ 5.00	\$ -	\$ 5.72	\$	-
4.4	115kV - (1) 795kcmil 26/7 ACSR "Drake"	34,927.0	LF	\$ 1.72	\$ 60,074	\$ 5.00	\$ 174,635	\$ 6.72	\$	234,709
4.5	(1) OPGW 36 Fiber AC-33/38/571	11,642.0	LF	\$ 1.35	\$ 15,717	\$ 5.00	\$ 58,210	\$ 6.35	\$	73,927
4.6	(1) 3/8" EHS7 Steel	11,642.0	LF	\$ 0.47		\$ 5.00		·		63,682
4.7	Remove Existing Cable	2.1	Mile	\$ -	\$ -	\$ 30,000	\$ 63,600		\$	63,600
4.8	Remove Existing OPGW Cable	-	Mile	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$	
4.9	Remove Existing EH7	2.1	Mile	\$ -	\$ -	\$ 12,000	\$ 25,440	\$ 12,000.00	\$	25,440
4.10		-								
4.11		-								
4.12	Rider Poles (Locations)	2.0	EA	\$ 1,750	\$ 3,500	\$ 3,500	\$ 7,000	\$ 5,250.00	\$	10,500
4.13										
	UCTOR, SHIELDWIRE, OPGW:				\$ 84,763		\$ 387,095		\$	471,858
	FITTINGS, HARDWARE		Accombb	\$ 1,800	ć	\$ 720	\$ -	\$ 2,520	ć	
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly) 115kV Tangent (1-Group of 9-Bells Each Assembly)	- 54	Assembly Assembly	\$ 1,800	\$ -	\$ 720	\$ 19,440	\$ 2,520 \$ 1,260	Ś	68,040
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)		Assembly	\$ 1,800		\$ 720		\$ 2,520	_	-
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	36	Assembly	\$ 900		\$ 360	\$ 12,960			45,360
5.5					\$ -		\$ -	\$ -	\$	-
5.6	OPGW Assembly - Tangent	18	Assembly	\$ 200		\$ 150				6,300
5.7	OPGW Assembly - Angle / DE	12	Assembly	\$ 250		\$ 150	\$ 1,800			4,800
5.8	OHSW Assembly - Tangent	18	Assembly	\$ 200		\$ 150				6,300
5.9 5.10	OHSW Assembly - Angle / DE	12	Assembly	\$ 250 \$ 1,746		\$ 150 \$ 2,274	\$ 1,800 \$ 4,548			4,800 8,040
5.10	OPGW Splice Boxes OPGW Splice & Test	2	Set EA	\$ 1,746		\$ 2,274	\$ 4,548			10,080
5.12	Spacer - Conductor	-	EA	\$ 2,320		\$ 2,320		\$ 3,040		- 10,080
	Vibration Dampers - Conductor	72	EA	\$ 35						5,040
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	25	EA	\$ 27						1,550
5.15	Guys, Anchors, and Accessories	-	EA	\$ 720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.16	Misc. materials (Signs and Markers)	2.1	Mile	\$ 770	\$ 1,617	\$ 1,006	\$ 2,113	\$ 1,776	\$	3,730
5.17										
5.18										
5.19 5.20										
	L ATORS, FITTINGS, HARDWARE:				\$ 107,544		\$ 56,496		\$	164,040
. J IAL - 11430L	Oley Oy HARD WAILE				107,344		7 30,490		٧	104,040

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Blue S	tores Junction to Blue Stores Substation					\$ 1,025,639		\$ 3,720,722		\$ 4,746,361
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 295,076	\$ 295,076	\$ 295,076	\$ 295,076
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 237,318	\$ 237,318	\$ 237,318	\$ 237,318
6.6	Lidar	1	LS	\$	-	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.7	Geotech	2	Location	\$	-	\$ -	\$ 3,500	\$ 7,000	\$ 3,500	\$ 7,000
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 33,225	\$ 33,225	\$ 33,225	\$ 33,225
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ 153,000	\$ 153,000	\$ 153,000	\$ 153,000
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 8	2,051	\$ 82,051	\$ -	\$ -	\$ 82,051	\$ 82,051
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 4,746	\$ 4,746	\$ 4,746	\$ 4,746
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 82,051		\$ 921,234		\$ 1,003,285

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C. TL BS Junc.-Blue Stores SS

NextEra T022 (Segment B) D. Knickerbocker 345kV Substation - Install

Estimate Revision: 5 Total: \$ 19,118,107

NextEra TO22 (Segment B)										
		Supply	Installa	tion		Total				
D. Knickerbocker 345kV Substation - Install										
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	223,675	\$ 1	,936,115	\$	2,159,790				
2. SUBSTATION FOUNDATIONS	\$	1,572,935	\$ 1	,694,150	\$	3,267,085				
3. SUBSTATION STRUCTURES	\$	727,975	\$	727,975	\$	1,455,950				
4. MAJOR EQUIPTMENT	\$	600,000	\$	240,000	\$	840,000				
5. SMALL EQUIPTMENT / MATERIALS	\$	1,086,500	\$	489,500	\$	1,576,000				
6. CONTROL HOUSE / PANELS	\$	1,837,125	\$ 1	,227,625	\$	3,064,750				
7. MISC ITEMS	\$	1,061,528	\$ 1	,684,810	\$	2,746,338				
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	568,779	\$ 3	,439,415	\$	4,008,194				
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-				
SUBTOTAL:	\$	7,678,517	\$ 11	,439,590	\$	19,118,107				
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-				
TOTAL:	\$	7,678,517	\$ 11	,439,590	\$	19,118,107				

Item	Item Description	Estimated Quantity	Unit of Measure	Mat	terial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Knicke	erbocker 345kV Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	3.875	ACRES	\$	-	\$ -	\$ 355,000	\$ 1,375,625	\$ 355,000	\$ 1,375,625
1.2	Station stone within substation fence.	1,650	СУ	\$	27	\$ 44,550	\$ 75	\$ 123,750	\$ 102	\$ 168,300
1.3	Substation Fence	1,660	LF	\$	100	\$ 166,000	\$ 100	\$ 166,000	\$ 200	\$ 332,000
1.4										
1.5										
1.6	Permanent Access Road - 20'-Wide	275	LF	\$	35	\$ 9,625	\$ 285	\$ 78,375	\$ 320	\$ 88,000
1.7	Pavement	3,373	SY	\$	-	\$ -	\$ 55	\$ 185,515	\$ 55	\$ 185,515
1.8	Gates	1	EA	\$	2,000	\$ 2,000	\$ 2,500	\$ 2,500	\$ 4,500	\$ 4,500
1.9	Culverts / Misc. Access	2	EA	\$	750	\$ 1,500	\$ 1,250	\$ 2,500	\$ 2,000	\$ 4,000
1.10	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 223,675		\$ 1,936,115		\$ 2,159,790
2. SUBSTATION	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	3	EA	\$	14,940	\$ 44,820	\$ 16,000	\$ 48,000	\$ 30,940	\$ 92,820
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	16	EA	\$	26,145	\$ 418,320	\$ 28,000	\$ 448,000	\$ 54,145	\$ 866,320
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	72	EA	\$	4,482	\$ 322,704	\$ 4,800	\$ 345,600	\$ 9,282	\$ 668,304
2.1f	Station Service Transformer Stand Foundation	4	EA	\$	4,482	\$ 17,928	\$ 4,800	\$ 19,200	\$ 9,282	\$ 37,128
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	72	EA	\$	4,482	\$ 322,704	\$ 4,800	\$ 345,600	\$ 9,282	\$ 668,304
2.1j	Instrument Transformer Stand Foundations	27	EA	\$	4,482	\$ 121,014	\$ 4,800	\$ 129,600	\$ 9,282	\$ 250,614
2.1k	Arrester Stand Foundations	9	EA	\$	4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1m	Wave Trap Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1n	Reactor Foundations	0	EA	\$	7,470	\$ -	\$ 8,000	\$ -	\$ 15,470	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1p	Misc. Structure Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1q									
2.2	230kV								
2.2a	Circuit Breaker Foundations		EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations		EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations		EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$ 16,434	\$ 131,472	\$ 17,600	\$ 140,800	\$ 34,034	\$ 272,272
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3j	Instrument Transformer Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3k	Arrester Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 44,260	\$ 44,260	\$ 47,400	\$ 47,400	\$ 91,660	\$ 91,660
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
2.5c	Station Service Distribution Line - 3ph.	1	LS	\$ -	\$ -	\$ 9,750	\$ 9,750	\$ 9,750	\$ 9,750
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	5	EA	\$ 5,229	\$ 26,145	\$ 5,600	\$ 28,000	\$ 10,829	
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL SUBS	TATION FOUNDATIONS				\$ 1.572.935		\$ 1.694.150		\$ 3,267,085
	N STRUCTURES				\$ 1,572,935		\$ 1,694,150		\$ 3,267,085
3.1	345kV								

Item	Item Description E	Estimated Quantity	Unit of Measure	Material Su	pply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	т	TOTAL
3.1a	Substation A-Frame Structures - Stand alone	4	EA	\$	37,000	\$ 148,000	\$ 37,000	\$ 148,000	\$ 74,000	\$	296,000
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$	37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$	-
3.1c	Switch Stands	12	EA	\$	14,800	\$ 177,600	\$ 14,800	\$ 177,600	\$ 29,600	\$	355,200
3.1d	Station Service Transformer Stand	1	EA	\$	14,800	\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$	29,600
3.1e	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
3.1f	Bus Support 1 Ph	72	EA	\$	3,700	\$ 266,400	\$ 3,700	\$ 266,400	\$ 7,400	\$	532,800
3.1g	Instrument Transformer Stand	27	EA	\$	1,850	\$ 49,950	\$ 1,850	\$ 49,950	\$ 3,700	\$	99,900
3.1h	Arrester Stand	9	EA	\$	1,850	\$ 16,650	\$ 1,850	\$ 16,650	\$ 3,700	\$	33,300
3.1j	Wave Trap Stand	3	EA	\$	7,400	\$ 22,200	\$ 7,400	\$ 22,200	\$ 14,800	\$	44,400
3.1k	Lightning Mast - 70'	5	EA	\$	6,475	\$ 32,375	\$ 6,475	\$ 32,375	\$ 12,950	\$	64,750
3.2	230kV										
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$	33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$	33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2c	Switch Stands	0	EA	\$	_			\$ -	\$ 24,050	\$	-
3.2d	Station Service Transformer Stand	0	EA	\$		\$ -		\$ -	\$ 24,050	\$	-
3.2e	Bus Support 3ph	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$	-
3.2f	Bus Support 1 Ph	0	EA	\$	2,775	\$ -	\$ 2,775	\$ -	\$ 5,550	\$	-
3.2g	Instrument Transformer Stand	0	EA	\$		\$ -	\$ 1,295		\$ 2,590	· ·	_
3.2h	Arrester Stand	0	EA	\$		\$ -		\$ -	\$ 2,590	\$	-
3.2j	Wave Trap Stand	0	EA	\$		\$ -		\$ -	\$ 11,100	-	_
3.2k	Misc. Structures	0	EA	\$	_	\$ -	,	\$ -	\$ 12,950	\$	_
J.EK	wisc. Structures		LA	7	0,473	-	Ç 0,473	Ÿ	7 12,550	7	
3.3	115kV										
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$	-
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500	\$ -		\$ -	\$ 37,000	Ś	
3.3c	Switch Stands	0	EA	\$	7,955	\$ -		\$ -	\$ 15,910	Ś	
3.3d	Fuse Stand	0	EA	\$	7,955	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 15,910	\$	_
3.3e	Bus Support 3ph	0	EA	\$		\$ -	\$ 3,330		\$ 6,660	-	
3.3f	Bus Support 1 Ph	0	EA	\$	_	\$ -		\$ -	\$ 3,700		-
	Instrument Transformer Stand	0	EA	\$		\$ -		\$ -	\$ 1,480		
3.3g 3.3h	Arrester Stand	0	EA	\$	740	\$ - \$ -	\$ 740 \$ 740	\$ - \$ -	\$ 1,480	Ś	
		0	EA EA	Ś				•			
3.3j	Wave Trap Stand			<u> </u>	3,700	\$ -	,	•	, , , , ,	\$	-
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	Þ	-
	TATION STRUCTURES					\$ 727,975		\$ 727,975		\$	1,455,950
4. MAJOR EQI											
4.1	345kV				200 000	4 500,000	A 00.000	A 240,000	.		
4.1a	Circuit Breakers	3	EA	\$,	\$ 600,000		\$ 240,000	\$ 280,000		840,000
4.1b	Capacitor Banks with Reactors	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.1c											
4.1d											
4.1e											
4.2	230kV										
4.2a	Circuit Breakers	0	EA	\$		\$ -	\$ 80,000		\$ 195,000	<u> </u>	-
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.3	115kV										
4.3a	Circuit Breakers	0	EA	\$	52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$	-
							4 50,000				-
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$	- ,

						Labor & Equipment	Labor & Equipment			
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate		TOTAL
TOTAL - MAJO	R EQUIPTMENT				\$ 600,000		\$ 240,000		\$	840,000
5. SMALL EQU	PTMENT / MATERIALS									
5.1	345kV									
5.1a	Line Switches - 3ph w/ motor operator	3	EA	\$ 40,000	\$ 120,000	\$ 15,000	\$ 45,000	\$ 55,000	\$	165,000
5.1b	Disconnect Switches - 3ph w/ manual operator	6	EA	\$ 35,000	\$ 210,000	\$ 17,500	\$ 105,000	\$ 52,500	\$	315,000
5.1c	VT'S	9	EA	\$ 25,000	\$ 225,000	\$ 12,000	\$ 108,000	\$ 37,000	\$	333,000
5.1d	CT'S	9	EA	\$ 13,000	\$ 117,000	\$ 8,000	\$ 72,000	\$ 21,000	\$	189,000
5.1e	CCVT'S	9	EA	\$ 13,000	\$ 117,000	\$ 8,000	\$ 72,000	\$ 21,000	\$	189,000
5.1f	Arresters	9	EA	\$ 6,500	\$ 58,500	\$ 1,500	\$ 13,500	\$ 8,000	\$	72,000
5.1g	Wave Traps	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$	63,000
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$	250,000
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$	-
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$	-
5.2c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$	-
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$	-
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3	115kV									
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$	-
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$	-
5.3c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.3d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.3e	CCVT'S	0	EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$	-
5.3f	Arresters	0	EA	\$ 3,420	\$ -	\$ 6,000	\$ -	\$ 9,420	\$	-
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ 1,086,500		\$ 489,500		\$	1,576,000
6. CONTROL H	OUSE / PANELS / GENERATOR									
6.1	CONTROL HOUSE	1	EA	\$ 409,500	\$ 409,500	\$ 95,000	\$ 95,000	\$ 504,500	\$	504,500
				,	,	,,,,,,,	,	2.5 7.5 2.5	<u> </u>	. ,
6.2	Protection and Telecom Equipment Panels	17	EA	\$ 35,000	\$ 595,000	\$ 10,000	\$ 170,000	\$ 45,000	Ś	765,000
0.2	- roteston and recessin Equipment raneis	1	2.	35,000	333,000	10,000	170,000	, ,,,,,,	,	, 00,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	4	200,000
6.4	Control Cables	1	LS	\$ 75,000						635,250
6.5	SCADA and Communications	1	EA EA	\$ 50,000	\$ 50,000			\$ 150,000		150,000
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000			\$ 150,000		300,000
	DC Distribution System	2		\$ 50,000	\$ 100,000	· ·		\$ 150,000		300,000
6.8		1	EA EA	\$ 7,500	\$ 7,500			\$ 15,000		15,000
6.9	Security Fire Alarm	1	EA	\$ 7,500	\$ 7,500		\$ 7,500	\$ 15,000		15,000
		1	EA EA	\$ 7,500	\$ 7,500			\$ 15,000	-	
6.10	Generator	1	EA	φ 100,000	φ 100,000	\$ 80,000	φ 8υ,υ00	φ 180,000	>	180,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
OTAL - CONTR	ROL HOUSE / PANELS / GENERATOR				\$ 1,837,125		\$ 1,227,625		\$	3,064,750
. MISC ITEMS										
7.1	Conduit & Cable Trench System	1,050	LF	\$ 185.00	\$ 194,250	\$ 170.00	\$ 178,500	\$ 355	\$	372,750
7.2	Rigid Bus, Fittings & Insulators	1,900	LF	\$ 125.07	\$ 237,633	\$ 237.10	\$ 450,490	\$ 362	\$	688,123
7.3	Strain Bus, Connectors & Insulators	1,000	LF	\$ 39.30	\$ 39,300	\$ 53.35	\$ 53,350	\$ 93	\$	92,650
7.4	Grounding System	16,500	LF	\$ 6.93	\$ 114,345	\$ 32.58	\$ 537,570	\$ 40	\$	651,915
7.5	Strain Bus Insulators - 345kV	38	EA	\$ 2,000	\$ 76,000	\$ 1,050	\$ 39,900	\$ 3,050	\$	115,900
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$	-
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$	-
7.8	Low Voltage AC Station Service	1	LS	\$ 50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.9	SSVT Service	1	LS	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12										
7.13										
7.14										
7.15										
7.16									<u> </u>	
7.17									1	
7.18										
7.19									<u> </u>	
7.20									\vdash	
7.21										
7.22									\vdash	
7.23										
7.24									\vdash	
7.25										
OTAL - MISC I	ITEMS				\$ 1,061,528		\$ 1,684,810		\$	2,746,338
	erbocker 345kV Substation - Install				\$ 7,109,738		\$ 8,000,175		Ś	15,109,913
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				7,103,730		\$ 0,000,173		-	13,103,313
	Contractor Mobilization / Demobilization									
	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 151,099	\$ 151,099	\$ 151,099	Ś	151,099
	Project Management, Material Handling & Amenities	1.0	25	7	7	3 151,055	7 131,033	ý 131,033	 	131,033
8.7	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 939,368	\$ 939,368	\$ 939,368	\$	939,368
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 151,099	\$ 151,099	\$ 151,099	\$	151,099
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 151,099	\$ 151,099	\$ 151,099	\$	151,099
	Engineering									
	Design Engineering	1	LS	\$ -	\$ -	\$ 1,208,793	\$ 1,208,793	\$ 1,208,793	\$	1,208,793
	Lidar	-	LS	\$ -	\$ -	\$ -	\$ -		\$	-
8.7	Geotech	4	EA	\$ -	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
	Surveying/Staking	1	Site	\$ -	\$ -	\$ 105,769				105,769
	Testing & Commissioning									
	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 377,748	\$ 377,748	\$ 377,748	\$	377,748
	Permitting and Additional Costs						,			
	Environmental Licensing & Permitting Costs	_	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	te Materia	ial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 45,330	\$ 45,330	\$ 45,330	\$ 45,330
8.13	Real Estate Costs (New)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$	-	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000
8.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 568,7	79 \$	568,779	\$ -	\$ -	\$ 568,779	\$ 568,779
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 15,110	\$ 15,110	\$ 15,110	\$ 15,110
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	568,779		\$ 3,439,415		\$ 4,008,194

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D. SS Knickerbocker - Install

		NextEra T022 (Segment B)			E. Greenbush Substation - Removal
Estimate Revision:	5		Total:	\$ 72,410	
		NextEra T022 (Segment B)			

NextEra T022 (Segn	nent B)			
	Supply		Installation	Total
E. Greenbush Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ 12,000	\$ 12,000
3. SUBSTATION STRUCTURES	\$	-	\$ -	\$ -
4. MAJOR EQUIPTMENT	\$	-	\$ 7,000	\$ 7,000
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 35,000	\$ 35,000
6. CONTROL HOUSE / PANELS	\$	-	\$ 7,200	\$ 7,200
7. MISC ITEMS	\$	-	\$ -	\$ -
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 11,210	\$ 11,210
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	-	\$ 72,410	\$ 72,410
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	-	\$ 72,410	\$ 72,410

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
E. Green	bush Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	NFOUNDATIONS								
	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 14,200		\$ 14,200	
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -		\$ -	\$ 2,400	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000		\$ 22,000	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ 11,000	\$ -	\$ 11,000	\$ -

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2h	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ 2,400	\$ -		\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	, ,	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -		\$ - \$ -	\$ 2,400	
2.2m 2.2n	Wave Trap Stand Foundations Misc. Structure Foundations	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.2p	INISC. Structure roundations	0	EA	-	-	-	\$ -	ş -	, -
2.3	115kV								
2.3a	Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 7,200	\$ 7,200	\$ 7,200	\$ 7,200
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h 2.3j	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	0 2	EA EA	\$ -	\$ - \$ -	\$ - \$ 2,400		\$ - \$ 2,400	\$ - \$ 4,800
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ 4,800	\$ 2,400	\$ 4,800
2.3K	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000		\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5 2.5a	Control House Foundations / Pad Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -
		Ü	EA	Ÿ	Ÿ	,	<u> </u>	Ť	<u>, </u>
2.6	Lightning Mast Foundations			4	4	1	_	1	•
2.6a	70' Lightning Mast Foundation	0		\$ -	\$ -	\$ -			\$ -
2.6b 2.6c		0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.60		0	EA	ş -	ş -	ş -	ş -	ş -	-
TOTAL - SUBS	TATION FOUNDATIONS				\$ -		\$ 12,000		\$ 12,000
	N STRUCTURES				*				
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	\$ -
3.1g 3.1h	Instrument Transformer Stand	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.1n 3.1j	Arrester Stand Wave Trap Stand	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ - \$ -	\$ -
J.1K		-		· ·	· ·	7	-	-	· ·
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ 27,000		\$ 27,000	
3.2c	Switch Stands	0	EA	\$ -	\$ -	\$ 9,750	\$ -	\$ 9,750	\$ -
3.2d	Station Service Transformer Stand	0		\$ -					\$ -
3.2e	Bus Support 3ph	0		\$ -	\$ -			\$ -	
3.2f	Bus Support 1 Ph	0		\$ -	\$ -	\$ 2,250		\$ 2,250	
3.2g	Instrument Transformer Stand	0		\$ -		\$ 1,050		\$ 1,050	
3.2h	Arrester Stand	0		\$ -		\$ 1,050		\$ 1,050	
3.2j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ 4,500	\$ -	\$ 4,500	\$ - D10-£4

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV								
	Substation A-Frame Structures - Stand alone	0		\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	
	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stands	0		\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	
	Fuse Stand Bus Support 3ph	0	EA EA	\$ -	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	ATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU					, -		,		,
	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d	22014/								
	230kV Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2a 4.2b	Capacitor Banks	0	EA EA	\$ -	\$ -	\$ 7,000	\$ - \$ -	\$ 7,000	
4.20	Capacitor Banks	0	LA	-	,	3 42,000	,	3 42,000	, -
4.3	115kV								
4.3a	Circuit Breakers	1	EA	\$ -	\$ -	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	R EQUIPTMENT				\$ -		\$ 7,000		\$ 7,000
	PTMENT / MATERIALS 345kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500		\$ 5,500	
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0		\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
	Arresters	0	EA	\$ -	\$ -		\$ -	\$ 1,500	
	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h 5.1j	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -		\$ -	\$ 5,500	
	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500		\$ 5,500	
	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0	EA	\$ -	\$ - \$ -	\$ - \$ 1.500	\$ - \$ -	\$ - \$ 1.500	\$ - \$ -
	CCVT'S Arresters	0	EA EA	\$ -	\$ -	\$ 1,500 \$ 2,500	\$ -	\$ 1,500 \$ 2,500	
	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
	115kV				4	4	•	<u> </u>	4
	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -		\$ -		\$ -
	Disconnect Switches - 3ph w/ manual operator VT'S	0		\$ -	\$ - \$ -		\$ -	\$ 5,500 \$ -	\$ - \$ -
	CT'S	0		\$ -	\$ -		\$ -		\$ -
	CCVT'S	2		\$ -		\$ 17,500			
	Arresters	0		\$ -	\$ -			\$ 1,500	
	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
	Station Service Transformers	0		\$ -			\$ -		\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
									D 20 -£ 42

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	EQUIPTMENT / MATERIALS				\$ -		\$ 35,000		\$ 35,000
	DUSE / PANELS / GENERATOR								
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
	Protection and Telecom Equipment Panels	2	EA	\$ -	\$ -		\$ 7,200	\$ 3,600	
	125VDC Batteries	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Control Cables	0		\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	SCADA and Communications	0	EA EA	7	7			7	7
	Low Voltage AC Distribution DC Distribution System	0		\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	Security	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.10	ocherato.			·	·	·	<u> </u>	·	*
TOTAL - CONTR	OL HOUSE / PANELS / GENERATOR				\$ -		\$ 7,200		\$ 7,200
7. MISC ITEMS							, , , ,		
	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
	Rigid Bus, Fittings & Insulators	0		\$ -	\$ -	\$ 126.25		\$ 126	
	Strain Bus, Connectors & Insulators	0	LS	\$ -	\$ -	\$ 21,000.00	\$ -	\$ 21,000	\$ -
	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	TEMS				\$ -		\$ -		\$ -
E. Green	bush Substation - Removal				\$ -		\$ 61,200		\$ 61,200
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
	Mob / Demob	1	LS	\$ -	\$ -	\$ 612	\$ 612	\$ 612	\$ 612
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 3,805	\$ 3,805	\$ 3,805	\$ 3,805
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 612	\$ 612	\$ 612	\$ 612
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 612	\$ 612	\$ 612	\$ 612
	Engineering								
	Design Engineering	1	LS	\$ -	\$ -	\$ 4,896	\$ 4,896	\$ 4,896	\$ 4,896
	LiDAR	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	-	EA	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500	
	Surveying/Staking	1	Site	\$ -	\$ -	\$ 428	\$ 428	\$ 428	\$ 428
	Testing & Commissioning								
	Testing & Commissioning of T-Line and Equipment Permitting and Additional Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 184	\$ 184	\$ 184	\$ 184
	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ 280,000	\$ -	\$ 280,000	
	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Carrying Charges	-	LS	\$ -	7	\$ -	\$ -	\$ -	\$ -
	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 61		\$ 61	
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 11,210		\$ 11,210

NextEra T022 (Segment B) H. North Churchtown Substation - Install

Total: \$ 18,595,643

NextEra T022 (Segm	ent B)				
	Supply			Installation	Total
H. North Churchtown Substation - Install					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	941,645	\$	2,992,813	\$ 3,934,458
2. SUBSTATION FOUNDATIONS	\$	1,001,293	\$	1,078,700	\$ 2,079,993
3. SUBSTATION STRUCTURES	\$	260,000	\$	432,345	\$ 864,690
4. MAJOR EQUIPTMENT	\$	260,000	\$	300,000	\$ 560,000
5. SMALL EQUIPTMENT / MATERIALS	\$	1,168,800	\$	785,800	\$ 1,954,600
6. CONTROL HOUSE / PANELS	\$	1,962,850	\$	1,310,350	\$ 3,273,200
7. MISC ITEMS	\$	972,988	\$	1,257,365	\$ 2,230,353
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	539,194	\$	3,159,155	\$ 3,698,349
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$ -
SUBTOTAL:	\$	7,106,770	\$	11,316,528	\$ 18,595,643
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$ -
TOTAL:	\$	7,106,770	\$	11,316,528	\$ 18,595,643

escr	ipti	ion	of	W	or	k:
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Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply F	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
H. North	Churchtown Substation - Install										
1. SITE PREP/	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	2.125	ACRES	\$	-	\$ -	\$ 660,000	\$ 1,402,500	\$ 660,000	\$	1,402,500
1.2	Station stone within substation fence.	1,000	CY	\$	27				\$ 102		102,000
1.3	Substation Fence	1,100	LF	\$		\$ 110,000			\$ 200		220,000
1.4	Permanent Access Road - 20'-Wide	740	LF	\$	35	\$ 25,900			\$ 320		236,800
1.5	Retaining Wall (1035' x Avg. of 7.15')	1	LS	\$ 313,		\$ 313,823			\$ 799,036		799,036
1.6	Compacted Fill (Sand)	27,143	CY	\$	17	\$ 461,423	\$ 20	\$ 542,850	\$ 37	\$	1,004,273
1.7											
1.8	Pavement	2,900	SY	7	-	\$ -	\$ 55		\$ 55		159,500
1.9	Gates	1	EA		,000	\$ 2,000			\$ 4,500		4,500
1.10	Culverts / Misc. Access	2	EA		750	\$ 1,500			\$ 2,000		4,000
1.11	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$	1,850
1.12										<u> </u>	
1.13										↓	
1.14										<u> </u>	
1.15										<u> </u>	
	REP/ GRADING/ FENCING / CIVIL					\$ 941,645		\$ 2,992,813		\$	3,934,458
	N FOUNDATIONS										
2.1	345kV										
2.1a	Circuit Breaker Foundations	0	EA		,940	\$ -		\$ -	\$ 30,940		-
2.1b	Capacitor Bank Foundations	0	EA		,025	\$ -	\$ 60,000		\$ 116,025		-
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA			\$ -	\$ 28,000		\$ 54,145		-
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA		,145	\$ -	,	· .	\$ 54,145		-
2.1e	Switch Stand Foundations	0	EA		,482	\$ -	\$ 4,800		\$ 9,282		-
2.1f	Station Service Transformer Stand Foundation	0	EA		,482	\$ -	\$ 4,800		\$ 9,282		-
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1h	Bus Support 1 Ph Foundations	0	EA		482	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 9,282		-
2.1j	Instrument Transformer Stand Foundations	0	EA EA		,482 ,482	\$ -	\$ 4,800 \$ 4,800		\$ 9,282 \$ 9,282		-
2.1k	Arrester Stand Foundations	0			_	\$ -	, , ,	Ÿ			
2.1m	Wave Trap Stand Foundations	0	EA EA	\$ 4.	,482	\$ - \$ -	7 .,	\$ - \$ -	-, -	\$	-
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	-	-
2.1p					-					├──	
2.2	230kV										
2.2a	Circuit Breaker Foundations	0	EA	\$ 11	,952	\$ -	\$ 12,800	\$ -	\$ 24,752	ć	-
2.2b	Capacitor Bank Foundations	0	EA		,820	\$ -	\$ 48,000		\$ 92,820		-
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA		_	\$ - \$ -	\$ 48,000		\$ 92,820		
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA		410	· -		\$ -	\$ 46,410		
2.20	Caisson De Foundations (for De Artaine St Shared Column)			1 22	,-10	7	24,000	-	7 40,410		22 642

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Item	Item Description	Estimated Quantity	Unit of Measure	Matarial Cumply Bata	Material Supply Cost	Labor & Equipment	Labor & Equipment	Total Unit Rate	TOTAL
item	item Description	Estimated Quantity	Onit of Measure	Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Onit Rate	TOTAL
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000		\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -			\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000		\$ 7,735	
2.2j 2.2k	Instrument Transformer Stand Foundations Arrester Stand Foundations	0	EA EA	\$ 3,735 \$ 3,735	\$ - \$ -	\$ 4,000 \$ 4,000		\$ 7,735 \$ 7,735	
2.2K 2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ - \$ -	\$ 4,000		\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -		. ,	\$ -
2.2p				7	*	T	•	,	*
2.3	115kV								
2.3a	Circuit Breaker Foundations	5	EA	\$ 5,229	\$ 26,145	\$ 5,600	\$ 28,000	\$ 10,829	\$ 54,145
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$ 16,434	\$ 131,472		. , ,	\$ 34,034	·
2.3d	Caisson DE Foundations (for DE A frame str shared column)	24	EA	\$ 16,434	\$ 394,416			\$ 34,034	· · · · · · · · · · · · · · · · · · ·
2.3e	Switch Stand Foundations	28	EA	\$ 2,988	\$ 83,664			\$ 6,188	
2.3f	Fuse Stand Foundations	2	EA	\$ 2,988 \$ 2.988	\$ 5,976			\$ 6,188	
2.3g 2.3h	Bus Support 3ph Foundations Bus Support 1 Ph Foundations	14 15	EA EA	\$ 2,988 \$ 2,988	\$ 41,832 \$ 44,820		,		\$ 86,632 \$ 92,820
2.3ii 2.3j	Instrument Transformer Stand Foundations	45	EA	\$ 2,988	\$ 134,460			\$ 6,188	
2.3k	Arrester Stand Foundations	15	EA	\$ 2,988	\$ 44,820			\$ 6,188	
2.3m	Wave Trap Stand Foundations	10	EA	\$ 2,988	\$ 29,880			\$ 6,188	
2.3n	Station Service Foundations	1	EA	\$ 3,735	\$ 3,735		\$ 4,000	\$ 7,735	
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -			\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 33,615	\$ 33,615				\$ 69,615
2.5b	Generator Foundation	1		\$ 16,000 \$ -	\$ 16,000	\$ 17,000	, , , , , , , , , , , , , , , , , , , ,		\$ 33,000
2.5c 2.6	Station Service Distribution Line - 1ph. Lightning Mast Foundations	1	LS	\$ -	\$ -	\$ 6,500	\$ 6,500	\$ 6,500	\$ 6,500
2.6a	70' Lightning Mast Foundation	2	EA	\$ 5,229	\$ 10,458	\$ 5,600	\$ 11,200	\$ 10,829	\$ 21,658
2.6b	70 Lightning Wast Foundation	0	EA	\$ -	\$ -	\$ -	. , ,		\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
TOTAL - SUBS	TATION FOUNDATIONS				\$ 1,001,293		\$ 1,078,700		\$ 2,079,993
3. SUBSTATIO	N STRUCTURES				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , , , , ,		, , , , , , , , , , , , , , , , , , , ,
3.1	345kV				•				
3.1a	Substation A Frame Structures - Stand alone	0		\$ 37,000	\$ -			\$ 74,000	
3.1b 3.1c	Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ 37,000 \$ 14,800	\$ - \$ -	\$ 37,000 \$ 14,800		\$ 74,000 \$ 29,600	
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -			\$ 29,600	
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -		,	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -	\$ 3,700		\$ 7,400	
3.1g	Instrument Transformer Stand	0	EA	\$ 1,850	\$ -	\$ 1,850		\$ 3,700	
3.1h	Arrester Stand	0	EA	\$ 1,850	\$ -	\$ 1,850			\$ -
3.1j	Wave Trap Stand	0	EA	\$ 7,400	\$ -	\$ 7,400			\$ -
3.1k	Lightning Masts - 70'	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0		\$ 33,300		\$ 33,300		\$ 66,600	•
3.2b	Substation A-Frame Structures - Shared Column	0				\$ 33,300		\$ 66,600	
3.2c 3.2d	Switch Stands Station Service Transformer Stand	0		\$ 12,025 \$ 12,025	\$ - \$ -	\$ 12,025 \$ 12,025		\$ 24,050 \$ 24,050	
3.2e	Bus Support 3ph	0		\$ 12,025	\$ -			\$ 1,078,700	
3.2f	Bus Support 1 Ph	0	EA	\$ 2,775	\$ -	\$ 2,775		\$ 5,550	
3.2g	Instrument Transformer Stand	0		\$ 1,295	\$ -			\$ 2,590	
3.2h 3.2j	Arrester Stand Wave Trap Stand	0		\$ 1,295 \$ 5,550		\$ 1,295 \$ 5,550		\$ 2,590 \$ 11,100	

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$ 18,500	\$ 37,000	\$ 18,500	\$ 37,000	\$ 37,000	\$ 74,000
3.3b	Substation A-Frame Structures - Shared Column	8	EA	\$ 18,500	\$ 148,000		. ,	. ,	\$ 296,000
			EA						
3.3c	Switch Stands	14		. ,	\$ 111,370			\$ 15,910	
3.3d	Fuse Stand	1		\$ 7,955	\$ 7,955			\$ 15,910	\$ 15,910
3.3e 3.3f	Bus Support 3ph Bus Support 1 Ph	7 15	EA EA	\$ 3,330 \$ 1,850	\$ 23,310 \$ 27,750			\$ 6,660 \$ 3,700	\$ 46,620 \$ 55,500
3.3g	Instrument Transformer Stand	45	EA	\$ 1,830	\$ 27,750			\$ 3,700	\$ 66,600
3.3h	Arrester Stand	15	EA	\$ 740	\$ 11,100			\$ 1,480	\$ 22,200
3.3j	Wave Trap Stand	5	EA	\$ 3,700	\$ 18,500				
3.3k	Lightning Mast	2	EA	\$ 6,475	\$ 12,950	\$ 6,475	\$ 12,950	\$ 12,950	\$ 25,900
3.31	Station Service Transformer Support Stand	1	EA	\$ 1,110	\$ 1,110	\$ 1,110	, .	\$ 2,220	
	TATION STRUCTURES				\$ 432,345		\$ 432,345		\$ 864,690
4. MAJOR EQU									
4.1 4.1a	345kV Circuit Breakers	0	EA	\$ 200,000	Ċ	\$ 80,000	\$ -	\$ 280,000	ć
4.1a 4.1b	Capacitor Banks	0	EA EA	\$ 200,000	\$ - \$ -	\$ 80,000		\$ 280,000	\$ - \$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000		\$ 750,000	
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -			\$ 750,000	
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV	-	EA.	ć 53,000	¢ 250,000	ć 50,000	ć 200.000	ć 443.000	ć 500.000
4.3a 4.3b	Circuit Breakers Capacitor Banks	5 0	EA EA	\$ 52,000 \$ -	\$ 260,000 \$ -	\$ 60,000 \$ 60,000	,	\$ 112,000 \$ 60,000	\$ 560,000 \$ -
4.30	Capacitor Banks	0	LA	,	-	3 00,000	,	ý 00,000	· -
TOTAL - MAJO	DR EQUIPTMENT				\$ 260,000		\$ 300,000		\$ 560,000
5. SMALL EQU	IIPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,000	\$ -	\$ 15,000			\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500		\$ 52,500	
5.1c 5.1d	VT'S CT'S	0	EA EA	\$ 25,000 \$ 13,000	\$ -	\$ 12,000 \$ 8,000		\$ 37,000 \$ 21,000	
5.1u 5.1e	CCVT'S	0	EA	\$ 13,000	\$ - \$ -	\$ 8,000 \$ 8,000		\$ 21,000	
5.1f	Arresters	0	EA	\$ 6,500	\$ -	\$ 1,500		\$ 8,000	
5.1g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000		\$ 21,000	
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.2	230kV		F.A.	ć 25.000	Ć.	¢ 45.000	ć	ć 50.000	^
5.2a 5.2b	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0	EA EA	\$ 35,000 \$ 30,000	\$ -	\$ 15,000 \$ 17,500		\$ 50,000 \$ 47,500	\$ - \$ -
5.20 5.2c	VT'S	0	EA	\$ 30,000	\$ -			\$ 47,500	
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000		\$ 21,000	
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -			\$ 16,000	
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000		\$ 11,000	
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000		\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
		5	EA	\$ 33,000	\$ 165,000			\$ 48,000	
5.3a	Line Switches - 3ph w/ motor operator			\$ 28,000	\$ 280,000	\$ 17,500	\$ 175,000	\$ 45,500	\$ 455,000
5.3b	Disconnect Switches - 3ph w/ manual operator	10			ć 105.555	ć	ė	A	A
5.3b 5.3c	Disconnect Switches - 3ph w/ manual operator VT'S	15	EA	\$ 13,000					
5.3b 5.3c 5.3d	Disconnect Switches - 3ph w/ manual operator VT'S CT'S	15 15	EA EA	\$ 13,000 \$ 13,000	\$ 195,000	\$ 8,000	\$ 120,000	\$ 21,000	\$ 315,000
5.3b 5.3c 5.3d 5.3e	Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	15 15 15	EA EA EA	\$ 13,000 \$ 13,000 \$ 8,000	\$ 195,000 \$ 120,000	\$ 8,000 \$ 8,000	\$ 120,000 \$ 120,000	\$ 21,000 \$ 16,000	\$ 315,000 \$ 240,000
5.3b 5.3c 5.3d	Disconnect Switches - 3ph w/ manual operator VT'S CT'S	15 15	EA EA EA	\$ 13,000 \$ 13,000	\$ 195,000	\$ 8,000 \$ 8,000 \$ 6,000	\$ 120,000 \$ 120,000 \$ 90,000	\$ 21,000 \$ 16,000 \$ 9,420	\$ 315,000 \$ 240,000 \$ 141,300

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.3j	Fuses	3	EA	\$ 7,500	\$ 22,500	\$ 3,600	\$ 10,800	\$ 11,100	\$ 33,300
							4		
	L EQUIPTMENT / MATERIALS				\$ 1,168,800		\$ 785,800		\$ 1,954,600
	OUSE / PANELS / GENERATOR	1		ć 202 F00	ć 202.500	¢ 05,000	ć 05.000	ć 277.F00	ć 277 F00
6.1	CONTROL HOUSE	1	EA	\$ 292,500	\$ 292,500	\$ 85,000	\$ 85,000	\$ 377,500	\$ 377,500
6.2	Protection and Telecom Equipment Panels	23	EA	\$ 35,000	\$ 805,000	\$ 10,000	\$ 230,000	\$ 45,000	\$ 1,035,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,000
6.4	Control Cables	1	LS	\$ 350,350	\$ 350,350		\$ 350,350	\$ 700,700	\$ 700,700
6.5	SCADA and Communications	1		\$ 50,000	\$ 50,000			\$ 150,000	
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000			\$ 150,000	
	DC Distribution System	2		\$ 50,000	\$ 100,000		\$ 200,000	\$ 150,000	
	Security	1	EA	\$ 7,500				\$ 15,000	
	Fire Alarm	1	EA	\$ 7,500	\$ 7,500		\$ 7,500	\$ 15,000	\$ 15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
	DOLLAR ADAMS A CONTRACTOR				4				
	ROL HOUSE / PANELS / GENERATOR				\$ 1,962,850		\$ 1,310,350		\$ 3,273,200
7. MISC ITEMS			, <u>.</u>						
7.1	Conduit & Cable Trench System	1,500.0	LF	\$ 185.00	\$ 277,500	\$ 170.00	\$ 255,000	\$ 355	\$ 532,500
7.2	Rigid Bus, Fittings & Insulators	900.0	LF	\$ 125.07	\$ 112,563	\$ 237.10	\$ 213,390	\$ 362	\$ 325,953
7.3	Strain Bus, Connectors & Insulators	1,500.0	LF	\$ 39.30	\$ 58,950	\$ 53.35	\$ 80,025	\$ 93	\$ 138,975
7.4	Grounding System	7,500.0	LF	\$ 6.93	\$ 51,975		· ·	\$ 40	,
7.5	Strain Bus Insulators - 345kV	0		\$ 2,000	\$ -		\$ -	\$ 3,050	
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -		\$ -	\$ 2,150	
7.7	Strain Bus Insulators - 115kV	72	EA	\$ 1,000	\$ 72,000			\$ 1,550	
7.8	Low Voltage AC Station Service	1	LS	\$ 50,000	\$ 50,000		\$ 75,000	\$ 125,000	
	SSVT Service	1		\$ 45,000	\$ 45,000		\$ 45,000	\$ 90,000	
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 125,000	\$ 125,000		\$ 125,000	\$ 250,000	
	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$ 360,000
7.12									
7.13			 						
7.14 7.15						 			
7.15									
7.10						+			
7.17				+		-			
7.19				+		+			
7.20				 					
7.21									
7.22				 		 			
7.23				 		 			
7.24									
7.25			ĺ			1			
TOTAL - MISC	ITEMS				\$ 972,988		\$ 1,257,365		\$ 2,230,353
H North	Churchtown Substation - Install				\$ 6,739,921		\$ 8,157,373		\$ 14,897,294
					0,755,521		0,137,373		7 14,037,294
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
8.1	Contractor Mobilization / Demobilization Mob / Demob	1.0	LS	\$ -	\$ -	\$ 148,973	\$ 148,973	\$ 148,973	\$ 148,973
0.1	Project Management, Material Handling & Amenities	1.0	LS	\$ -		٦ 146,973	<i>ξ</i> 146,973	۶ 146,973	3 148,973
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 926,150	\$ 926,150	\$ 926,150	\$ 926,150
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 148,973	\$ 148,973	\$ 148,973	\$ 148,973
	Site Accommodation, Facilities, Storage	1		\$ -	\$ -	\$ 148,973			
	Engineering					, ,	, 1	, , ,	
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 1,191,784	\$ 1,191,784	\$ 1,191,784	\$ 1,191,784
			LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lidar			- '	1.7	ا	Y	- ب	-
8.6	Geotech	4		\$ -	\$ -				

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply	Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Testing & Commissioning									
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 372,432	\$ 372,432	\$ 372,432	\$ 372,432
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation		LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 44,692	\$ 44,692	\$ 44,692	\$ 44,692
8.13	Real Estate Costs (New)		LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$	-	\$ 44,000	\$ 44,000	\$ 44,000	\$ 44,000
8.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.17	Carrying Charges	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 539,194	\$ 539	,194	\$ -	\$ -	\$ 539,194	\$ 539,194
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 14,897	\$ 14,897	\$ 14,897	\$ 14,897
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 539	,194		\$ 3,159,155		\$ 3,698,349

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H. SS North Churchtown-Install

NextEra T022 (Segment B) J. Pleasant Valley Substation - Install

Total: \$ 3,526,235

NextEra T022 (Segment B)										
		Supply	Installation	Total						
J. Pleasant Valley Substation - Install										
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	11,025	\$ 14,625	\$ 2	25,650					
2. SUBSTATION FOUNDATIONS	\$	161,177	\$ 171,300	\$ 33	32,477					
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$ 8	38,800					
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$ 28	30,000					
5. SMALL EQUIPTMENT / MATERIALS	\$	260,500	\$ 129,000	\$ 38	39,500					
6. CONTROL HOUSE / PANELS	\$	560,900	\$ 253,400	\$ 81	14,300					
7. MISC ITEMS	\$	409,950	\$ 457,275	\$ 86	57,225					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	131,836	\$ 596,447	\$ 72	28,283					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-					
SUBTOTAL:	\$	1,779,788	\$ 1,746,447	\$ 3,52	26,235					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-					
TOTAL:	Ś	1,779,788	\$ 1,746,447	\$ 3.52	26,235					

D	es	crı	pt	ıon	ot	w	or	k:

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Pleasa	nt Valley Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 230,000	\$ -	\$ 230,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$ 2	\$ 2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	90	LF	\$ 100	9,000	\$ 100	\$ 9,000	\$ 200	\$ 18,000
1.4	Permanent Access Road - 20'-Wide	0	LF	\$ 3!	- \$	\$ 285	\$ -	\$ 320	\$ -
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ 11,025		\$ 14,625		\$ 25,650
	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	1	EA	\$ 14,940					
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,02		\$ 60,000		\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,14		7/		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,14				\$ 54,145	
2.1e	Switch Stand Foundations	6	EA	\$ 4,48				\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,483	! \$ -	\$ 4,800		\$ 9,282	
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,483		\$ 4,800		\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	9	EA	\$ 4,48				\$ 9,282	
2.1k	Arrester Stand Foundations	3	EA	\$ 4,483	1 -7 -	, , , , , , , , , , , , , , , , , , , ,	· , , , , , , , , , , , , , , , , , , ,	\$ 9,282	
2.1m	Wave Trap Stand Foundations	1	EA	\$ 4,483	+:		\$ 4,800	\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,95		\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820				\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410		, , , , , , , , , , , , , , , , , , , ,		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410		\$ 24,000		\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,73!		\$ 4,000		\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,73		\$ 4,000	\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	Page 27 of 42

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	Ś -	\$ 10,829	\$ -
	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -		\$ -	\$ 69,615	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	\$ -
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p									
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -		\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
•									
2.5	Control House Foundations / Pad								
2.5a	Control House Addition Foundation (25-ft x 50-ft)	1	EA	· ·	\$ 61,079	,	\$ 64,100	\$ 125,179	\$ 125,179
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	ATION FOUNDATIONS				\$ 161,177		\$ 171,300		\$ 332,477
3. SUBSTATION					3 101,177		7 171,300		ÿ 332,477
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
	Substation A-Frame Structures - Shared Column	0		\$ 37,000	\$ -		\$ -	\$ 74,000	
	Switch Stands	1		\$ 14,800	\$ 14,800		\$ 14,800	\$ 29,600	\$ 29,600
	Station Service Transformer Stand	0		\$ 14,800	\$ -	\$ 14,800		\$ 29,600	
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.1g	Instrument Transformer Stand	9	EA	\$ 1,850	\$ 16,650		\$ 16,650	\$ 3,700	
	Arrester Stand	3		\$ 1,850	\$ 5,550		\$ 5,550	\$ 3,700	
	Wave Trap Stand	1	EA	\$ 7,400	\$ 7,400			\$ 14,800	· · · · · · · · · · · · · · · · · · ·
3.1k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2	230kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
	Substation A-Frame Structures - Shared Column	0				\$ 33,300		\$ 66,600	
	Switch Stands	0		\$ 12,025				\$ 24,050	
	Station Service Transformer Stand	0	EA	\$ 12,025			\$ -	\$ 24,050	
3.2e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
	Bus Support 1 Ph	0		\$ 2,775				\$ 5,550	
	Instrument Transformer Stand	0		, , , , , , ,		\$ 1,295		\$ 2,590	
	Arrester Stand	0		. ,	\$ -	\$ 1,295		\$ 2,590	
	Wave Trap Stand	0		\$ 5,550 \$ 6,475		\$ 5,550		\$ 11,100 \$ 12,950	
3.2k	Misc. Structures	0	EA	6,4/5	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ - D29-£42

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply R	te Material Supply Co	t Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,	00 \$ -	\$ 18,50	5 -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,		\$ 18,50		\$ 37,000	\$ -
3.3c	Switch Stands	0			55 \$ -			\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA		55 \$ -			\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA		30 \$ -	\$ 3,33) \$ -	\$ 6,660	
3.3f	Bus Support 1 Ph	0	EA	\$ 1,8	50 \$ -	\$ 1,85) \$ -	\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0			10 \$ -			\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$	10 \$ -	\$ 74) \$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,	00 \$ -	\$ 3,70) \$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,4	75 \$ -	\$ 6,47	5 \$ -	\$ 12,950	\$ -
	TATION STRUCTURES				\$ 44,40	0	\$ 44,400		\$ 88,800
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	1	EA	\$ 200,0	00 \$ 200,00			\$ 280,000	\$ 280,000
4.1b	Capacitor Banks - W/ Center Tap VT and Reactors	0			00 \$ -			\$ 450,000	
4.1c	Circuit Breakers - Cap Switching	0			00 \$ -			\$ 970,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	\$ -	\$ 750,00) \$ -	\$ 750,000	\$ -
4.2	230kV								
4.2a	Circuit Breakers	0		\$ 115,0		+		\$ 195,000	
4.2b	Capacitor Banks	0	EA	\$	\$ -	\$ 80,00) \$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 52,0		\$ 60,00		\$ 112,000	
4.3b	Capacitor Banks	0	EA	\$	\$ -	\$ 60,00) \$ -	\$ 60,000	\$ -
	D. FOLUMEN AFAIT								
	OR EQUIPTMENT				\$ 200,00	0	\$ 80,000		\$ 280,000
	IPTMENT / MATERIALS								
5.1	345kV		EA.	ć 40.	00 \$ 40,00	0 6 45.00	45.000	ć 55.000	ć FF 000
5.1a	Line Switches - 3ph w/ motor operator	1							
5.1b 5.1c	Disconnect Switches - 3ph w/ manual operator VT'S	1 3		\$ 35,0				\$ 52,500 \$ 37,000	\$ 52,500 \$ 111,000
5.1d	CT'S	3	EA			0 \$ 8,00			
5.1e	CCVT'S	3		\$ 13,0				\$ 21,000	
5.1f	Arresters	3	EA	\$ 6,5				21,000	\$ 24,000
5.1g	Wave Traps				00 7 15,50			\$ 9,000	
5.1h	wave maps	1 1	I FA		nn İ				
3.111	Station Service Transformers	1 0	EA	\$ 13,0		0 \$ 8,00	\$ 8,000	\$ 21,000	\$ 21,000
5.1i	Station Service Transformers	0		\$ 13,0	00 \$ 13,00		\$ 8,000		
5.1j	Station Service Transformers			\$ 13,0		0 \$ 8,00	\$ 8,000	\$ 21,000	\$ 21,000
				\$ 13,0		0 \$ 8,00	\$ 8,000	\$ 21,000	\$ 21,000
5.2	230kV	0	EA	\$ 13,0	00 \$ -	0 \$ 8,000 \$ 50,000	0 \$ 8,000 0 \$ -	\$ 21,000 \$ 250,000	\$ 21,000
5.2 5.2a	230kV Line Switches - 3ph w/ motor operator	0	EA EA	\$ 13,1 \$ 200,1 \$ \$ 35,1	00 \$ -	0 \$ 8,000 \$ 50,000 \$ 15,000	0 \$ 8,000 0 \$ -	\$ 21,000 \$ 250,000 \$ \$ 50,000	\$ 21,000 \$ - \$
5.2 5.2a 5.2b	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0 0 0	EA EA EA	\$ 13,1 \$ 200,1 \$ 35,1 \$ 30,1	00 \$ -	\$ 8,00 \$ 50,00 \$ 15,00 \$ 17,50	0 \$ 8,000 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500	\$ 21,000 \$ - \$ \$ - \$ -
5.2 5.2a 5.2b 5.2c	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0	EA EA EA	\$ 13,0 \$ 200,0 \$ 35,0 \$ 30,0 \$ 13,0	00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 15,000 \$ 17,500 \$ 8,000	\$ 8,000 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000	\$ 21,000 \$ - \$ \$ - \$ -
5.2 5.2a 5.2b	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0 0 0 0	EA EA EA	\$ 13,0 \$ 200,0 \$ 35,0 \$ 30,0 \$ 13,0 \$ 13,0	00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 15,000 \$ 17,500 \$ 8,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000	\$ 21,000 \$ - \$ - \$ - \$ - \$ -
5.2 5.2a 5.2b 5.2c 5.2d	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S	0 0 0 0 0	EA EA EA EA EA EA EA	\$ 13,0 \$ 200,0 \$ 35,0 \$ 36,0 \$ 13,0 \$ 13,0 \$ 10,0	00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 50,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000	\$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ -
5.2 5.2a 5.2b 5.2c 5.2c 5.2d 5.2e	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	0 0 0 0 0	EA EA EA EA EA EA EA	\$ 13,0 \$ 200,0 \$ 35,0 \$ 30,0 \$ 13,0 \$ 13,0 \$ 10,0 \$ 5,0	00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 15,000 \$ 17,500 \$ 8,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000	\$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ 13,0 \$ 200,0 \$ 35,0 \$ 30,0 \$ 13,0 \$ 13,0 \$ 10,0 \$ 5,0	00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 15,000 \$ 17,500 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 16,000 \$ 11,000	\$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2g	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ 13,4 \$ 200,4 \$ 35,0 \$ 30,0 \$ 13,0 \$ 10,0 \$ 5,5,6 \$ 13,1	00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 15,000 \$ 17,500 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ 13,4 \$ 200,4 \$ 35,0 \$ 30,0 \$ 13,0 \$ 10,0 \$ 5,5,6 \$ 13,1	00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 15,000 \$ 17,500 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ 13,4 \$ 200,4 \$ 35,0 \$ 30,0 \$ 13,0 \$ 10,0 \$ 5,5,6 \$ 13,1	00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 15,000 \$ 17,500 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2g 5.2h 5.2j	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,4 \$ 200,4 \$ 35,4 \$ 30,6 \$ 13,6 \$ 10,6 \$ 5,5 \$ 13,6 \$ 5,5 \$ 13,6 \$ 5,5 \$ 13,6 \$ 5,5 \$ 13,6 \$ 5,5 \$ 13,6 \$ 5,5 \$ 13,6 \$ 5,5 \$ 13,6 \$ 5,5 \$ 13,6 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5,5 \$ 5	00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ - 00 \$ -	\$ 15,000 \$ 17,500 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2 5.2a 5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j	230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers	0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 13,4 \$ 200,4 \$ 35,5 \$ 36,5 \$ 13,6 \$ 13,6 \$ 13,6 \$ 13,6 \$ 5,5 \$ 13,6 \$ 28,6	00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -00 \$ -	\$ 15,000 \$ 17,500 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 7,000 \$ 15,000 \$ 15,000	0 \$ 8,000 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ - 0 \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ -	\$ 21,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE Addition (25-ft x 50-ft)	1	EA	\$ 325,000	\$ 325,000	\$ 85,000	\$ 85,000	\$ 410,000	\$ 410,0
6.2	Protection and Telecom Equipment Panels	3	EA	\$ 35,000	\$ 105,000		\$ 37,500	\$ 47,500	-
6.3	125VDC Batteries	0	EA	\$ 75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
6.4	Control Cables	1	LS	\$ 130,900	\$ 130,900	\$ 130,900	\$ 130,900	\$ 261,800	\$ 261,8
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.7	DC Distribution System	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.8	Security	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
6.9	Fire Alarm	0	EA	\$ 7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
6.10	Generator	0	EA	\$ 100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ 560,900		\$ 253,400		\$ 814,3
7. MISC ITEMS									
7.1	Conduit & Cable Trench System	800	LF	\$ 185.00	\$ 148,000		\$ 136,000	\$ 355	\$ 284,0
7.2	Rigid Bus, Fittings & Insulators	0	LF	\$ 125.07	\$ -	\$ 237.10	\$ -	\$ 362	\$ -
7.3	Strain Bus, Connectors & Insulators	2,500	LF	\$ 13.38	\$ 33,450	\$ 39.35	\$ 98,375	\$ 53	\$ 131,8
7.4	Grounding System	0	LF	\$ 6.93	\$ -	\$ 32.58		\$ 40	
7.5	Strain Bus Insulators - 345kV	38	EA	\$ 2,000	\$ 76,000		\$ 39,900	\$ 3,050	
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -	\$ 750	\$ -	\$ 2,150	
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$ -	\$ 550		\$ 1,550	
7.8	Low Voltage AC Station Service	0	LS	\$ 50,000	\$ -	\$ 75,000		\$ 125,000	
7.9	SSVT Service	0	LS	\$ 45,000	\$ -	\$ 45,000	\$ -		\$ -
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 62,500	\$ 62,500		\$ 75,000	\$ 137,500	
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 90,000	\$ 90,000	\$ 108,000	\$ 108,000	\$ 198,000	\$ 198,0
7.12									
7.13									
7.14									
7.15									
7.16									
7.17									
7.18									
7.19									
7.20									
7.21									
7.22									
7.23									
7.24									
7.25 TOTAL - MISC	ITEMS:				ć 400.050		ć 457.075		ć 657.0
					\$ 409,950		\$ 457,275		\$ 867,2
J. Pleasa	nt Valley Substation - Install				\$ 1,647,952		\$ 1,150,000		\$ 2,797,9
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 27,980	\$ 27,980	\$ 27,980	\$ 27,9
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 173,946	\$ 173,946	\$ 173,946	\$ 173,9
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 27,980	\$ 27,980	\$ 27,980	\$ 27,9
8.4	·	1		¢ .	\$ -				
0.4	Site Accommodation, Facilities, Storage Engineering	1	IJ	\$ -	-	\$ 27,980	\$ 27,980	\$ 27,980	\$ 27,9
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 223,836	\$ 223,836	\$ 223,836	\$ 223,8
8.6	LiDAR	-	LS	\$ -			\$ 223,836		\$ 223,8
8.7	Geotech	4	EA	\$ -	\$ -				
8.8	Surveying/Staking	1	Site	\$ -		\$ 19,586			
J.0	Testing & Commissioning	1	Site	· ·	1	7 13,360	7 19,360	2 13,360	· 15,5
8.9	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 69,949	\$ 69,949	\$ 69,949	\$ 69,9
J.,5	Permitting and Additional Costs	1		· ·	,	y 03,345	y 09,349	· · · · · · · · · · · · · · · · · · ·	y 03,3
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.10	I			1 *	1.*	T	L T		T -

Item	Item Description	Estimated Quantity	Unit of Measure	Material S	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.11	Environmental Mitigation	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 8,394	\$ 8,394	\$ 8,394	\$ 8,394
8.13	Real Estate Costs (New)		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	٠	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17	Carrying Charges		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	131,836	\$ 131,836	\$ -	\$ -	\$ 131,836	\$ 131,836
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 2,798	\$ 2,798	\$ 2,798	\$ 2,798
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 131,836		\$ 596,447		\$ 728,283

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J. SS Pleasant Valley-Install

NextEra T022 (Segment B) Interconnection Knickerbocker Station

Estimate Revision: 5 Total: \$ 1,826,890

NextEra T022 (S	22 (Segment B)							
		Supply	Installation	Total				
L. Interconnection Knickerbocker Station								
1. CLEARING & ACCESS	\$	-	\$ 436,850	\$ 436,850				
2. FOUNDATIONS	\$	238,638	\$ 241,194	\$ 479,832				
3. STRUCTURES	\$	313,836	\$ 219,711	\$ 533,547				
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -				
5. INSULATORS, FITTINGS, HARDWARE	\$	58,150	\$ 26,466	\$ 84,616				
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	48,850	\$ 243,195	\$ 292,045				
CONTRACTOR MARK-UP (OH&P)	\$		\$ -	\$ -				
SUBTOTAL:	\$	659,474	\$ 1,167,416	\$ 1,826,890				
CONTINGENCY ON ENTIRE PROJECT	\$		\$ -	\$ -				
TOTAL:	Ś	659.474	\$ 1.167.416	\$ 1.826.890				

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Materi	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
L. Interc	onnection Knickerbocker Station									
1. CLEARING 8	ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45			\$ -
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	525.0	LF	\$	-	\$ -	\$ 70	\$ 36,750	\$ 70	\$ 36,750
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	35,000.0	SF	\$	-	\$ -	\$ 4	\$ 123,200	\$ 4	\$ 123,200
1.10	Restoration for Work Pad areas	7,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 1,050	\$ 0	\$ 1,050
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$	750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18						\$ -		\$ -		\$ -
1.19						\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEAR	RING & ACCESS					\$ -		\$ 436,850		\$ 436,850
2. FOUNDATION	DNS									
2.1	Drilled Pier - 345KV THREE POLE TAP, STEEL	2	Structures	\$	119,319	\$ 238,638	\$ 120,597	\$ 241,194	\$ 239,916	\$ 479,832
2.2										
2.3										
2.4				1						
2.5	Rock Excavation Adder	-	СҮ	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.6						\$ -		\$ -		\$ -
2.7						\$ -		\$ -		\$ -

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Item	item Description	Estimated Quantity	Unit of Measure	Material Supply		Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.8					\$			\$ -		\$ -
2.9					\$			\$ -		\$ -
2.10					\$			\$ - \$ -		\$ - \$ -
2.11					\$			\$ -) -
2.13					Ś			\$ -		, - \$ -
2.14					Ś			\$ -		<u>,</u>
2.15					\$	-		\$ -		, \$ -
TOTAL - FOUNI	DATIONS				\$	238,638		\$ 241,194		479,832
3. STRUCTURES	5									
	345KV THREE POLE TAP, STEEL	2	Structure	\$ 15	55,400 \$	310,800	\$ 93,240	\$ 186,480	\$ 248,640	\$ 497,280
3.2										
3.3										
3.4					\$			\$ -		\$ -
3.5	Install Grounding and Grounding Accessories	6	Pole	\$	506 \$	-,	\$ 5,539	\$ 33,231		
3.6				-	\$			\$ -		\$ -
3.7				-	\$			\$ - \$ -		\$ - \$ -
3.8				 	\$			\$ -) -
3.10				 	Ś			\$ -		, -
3.11					\$			\$ -		\$ -
3.12					\$			\$ -		\$ -
3.13					\$	-		\$ -		, \$ -
3.14					\$	-		\$ -		\$ -
3.15					\$	-		\$ -		\$ -
TOTAL - STRUC	TURES				\$	313,836		\$ 219,711		533,547
4. CONDUCTOR	R, SHIELDWIRE, OPGW									
4.1	345kV - (1) 1,033kcmil 54/7 ACSS "Curlew"	-	LF	\$	2.82 \$	-	\$ 5.00	\$ -	\$ 7.82	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35 \$	-	\$ 5.00		\$ 6.35	
4.3	(1) 3/8" EHS7 Steel	-	LF	\$	0.47 \$	-	\$ 5.00	\$ -	\$ 5.47	•
	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$	- \$		\$ 30,000	\$ -	,	\$ - •
4.6	Remove Existing OPGW Cable Remove Existing EH7	-	Mile Mile	\$	- \$ - \$	-	\$ 12,000	\$ -	, ,,,,,,,	\$ <u>-</u>
4.7	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$	- \$ 1.90 \$	-	\$ 12,000 \$ 5.00	\$ -		\$ - \$ -
4.8	113KV - (1) 534KCIIII 34/7 AC33 Caldillai	-	LF	,	1.50 7		3.00	· -	5 0.50	· -
	Rider Poles - Relocated	-	Set	\$	- \$	-	\$ 3,500	\$ -	\$ 3,500.00	\$ -
	Rider Poles	-	EA		1,750 \$	-	\$ 3,500	\$ -	\$ 5,250.00	
	JCTOR, SHIELDWIRE, OPGW:				\$	-		\$ -		\$ -
	FITTINGS, HARDWARE									
	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly		1,800 \$	-	\$ 720		\$ 2,520	
	115kV Tangent (1-Group of 9-Bells Each Assembly)	- 20	Assembly	\$	900 \$		\$ 560	\$ -	\$ 1,460	<u> </u>
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	30	Assembly	\$	1,800 \$ 900 \$	54,000	\$ 720 \$ 560		\$ 2,520 \$ 1,460	\$ 75,600 \$ -
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) OPGW Assembly - Tangent	-	Assembly Assembly	\$	200 \$	-	\$ 150	\$ - \$ -	\$ 1,460	•
	OPGW Assembly - Intigent OPGW Assembly - Angle / DE	2	Assembly	\$	250 \$	500	\$ 150	<u>'</u>		
	OHSW Assembly - Tangent	-	Assembly	\$	200 \$	-		\$ -	\$ 350	•
	OHSW Assembly - Angle / DE	2	Assembly	\$	250 \$	500	\$ 150	\$ 300		\$ 800
5.9	OPGW Splice Boxes	1	Set		1,750 \$	1,750	\$ 1,746	\$ 1,746	\$ 3,496	-,
	OPGW Splice & Test	1	EA		1,400 \$	1,400	\$ 2,520			
	Spacer - Conductor	-	EA	\$	50 \$	-	\$ 35		\$ 85	
	Vibration Dampers - Conductor	-	EA	\$	35 \$		\$ 35		\$ 70	•
	Shieldwire / OPGW Dampers, Misc. Fittings Guys, Anchors, and Accessories	-	EA EA	\$	27 \$ 720 \$	-	\$ 35 \$ 885	\$ - \$ -	\$ 62 \$ 1,605	•
5.45	Misc. materials (Signs and Markers)	-	Mile	\$	770 \$		\$ 1,006		\$ 1,005	
5.16				T			- 1,000	T	1,770	
5.17		-								
5.18										
5.19										
5.20										
TOTAL - INSULA	ATOR, FITTINGS, HARDWARE				\$	58,150		\$ 26,466		84,616
Lintorce	onnection Knickerbocker Station				\$	610,624		\$ 924,221		1,534,845
					3	010,024		7 324,221		1,334,643
6. MOR/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 15,348	\$ 15,348	\$ 15,348	\$ 15,348
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 95,420	\$ 95,420	\$ 95,420	\$ 95,420
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 15,348	\$ 15,348	\$ 15,348	\$ 15,348
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 15,348	\$ 15,348	\$ 15,348	\$ 15,348
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 76,742	\$ 76,742	\$ 76,742	\$ 76,742
6.6	Lidar	1	LS	\$ -	\$ -	\$ 4,605	\$ 4,605	\$ 4,605	\$ 4,605
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 10,744	\$ 10,744	\$ 10,744	\$ 10,744
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 40,000	\$ -	\$ 40,000	\$ -
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 4,605	\$ 4,605	\$ 4,605	\$ 4,605
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17	Carrying Charges	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 48,850	\$ 48,850	\$ -	\$ -	\$ 48,850	\$ 48,850
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 1,535	\$ 1,535	\$ 1,535	\$ 1,535
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 48,850		\$ 243,195		\$ 292,045

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L. In. Knickerbocker SS

NextEra T022 (Segment B) M. Interconnection Churchtown Station

5		Total:	\$ 6,093,830	
NextEra T022 (Segmen	t B)			
		Supply	Installation	Total
M. Interconnection Churchtown Station				
1. CLEARING & ACCESS	\$	-	\$ 712,850	\$ 712,850
2. FOUNDATIONS	\$	861,128	\$ 1,284,831	\$ 2,145,960
3. STRUCTURES	\$	885,174	\$ 687,622	\$ 1,572,796
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	481,350	\$ 200,586	\$ 681,936
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	178,212	\$ 802,077	\$ 980,289
CONTRACTOR MARK-UP (OH&P)	\$		\$ -	\$ -
SUBTOTAL:	\$	2,405,865	\$ 3,687,966	\$ 6,093,830
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	2,405,865	\$ 3,687,966	\$ 6,093,830

	TOTAL:	\$ 2,405,865	\$ 3,687,966	i Ş	6,093,830						
Description	of Work:										
Item	Item Description	Estimated Quantity	Unit of Measure	Ma	terial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
M. Inter	connection Churchtown Station										
1. CLEARING	& ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$	10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45	\$ -	\$ 45	\$	-
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$	14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000		\$	245,000
1.6	Matting - To Work Area	1,425.0	LF	\$	-	\$ -	\$ 70	\$ 99,750	\$ 70	\$	99,750
1.7	Snow Removal	-	LS	\$		\$ -	\$ 516,800		\$ 516,800		-
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000		_	5,000
1.9	Work Pads	95,000.0	SF	\$	-	\$ -	\$ 4	\$ 334,400	\$ 4	\$	334,400
1.10	Restoration for Work Pad areas	19,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 2,850	\$ 0	\$	2,850
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035		-
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445		\$ 14,445		-
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$	-
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$	-
1.15	Gates	-	EA	\$	2,000		\$ 2,500	<u> </u>	\$ 4,500	1	-
1.16	Culverts / Misc. Access	-	EA	\$	750		\$ 1,250		\$ 2,000	_	-
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	-	1,850
1.18						\$ -		\$ -		\$	-
1.19						\$ -		\$ -		\$	-
1.20	Crushed Rock	0	CY	\$	27		\$ 75		\$ 102	<u> </u>	-
	RING & ACCESS					\$ -		\$ 712,850		\$	712,850
2. FOUNDATI	ONS										
2.1	Drilled Pier - 345KV S/C DEADEND, STEEL	17	Structures	\$	50,485	\$ 858,249	\$ 51,026	\$ 867,441	\$ 101,511	\$	1,725,690
2.2	Direct Embed - 115KV DELTA S/C TANGENT, CONCRETE	2	Structures	\$	1,440	\$ 2,879	\$ 8,695	\$ 17,391	\$ 10,135	\$	20,270
2.3											
2.4											
2.5	Rock Excavation Adder	200	СҮ	\$	-	\$ -	\$ 2,000	\$ 400,000	\$ 2,000	\$	400,000
2.6						\$ -		\$ -		\$	-

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Estimate

Revision:

						Jahan Q Fanianana	Jahan Q Farriannant		
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ -		\$
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		\$ -
2.14					\$ -		\$ -		\$ -
2.15					\$ -		\$ -		\$ -
TOTAL - FOUND	PATIONS				\$ 861,128		\$ 1,284,831		\$ 2,145,960
3. STRUCTURES									
	345KV S/C DEADEND, STEEL	17	Structure	\$ 49,950	\$ 849,150		\$ 509,490		
	115KV DELTA S/C TANGENT, CONCRETE	2	Structure	\$ 13,205	\$ 26,410	\$ 36,450	\$ 72,900	\$ 49,655	\$ 99,310
3.3									
3.4					\$ -		\$ -		\$ -
	Install Grounding and Grounding Accessories	19	Pole	\$ 506		\$ 5,539	\$ 105,232	\$ 6,045	
3.6					\$ -		\$ -		\$ -
3.7					\$ -		\$ -		\$ -
3.8					\$ -		\$ -		\$ -
3.9					\$ -		\$ -		\$ -
3.10					\$ -		\$ -		\$ -
3.11					\$ -		\$ -		\$ -
3.12					\$ -		\$ -		\$ -
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
TOTAL - STRUCT	TURES				\$ 885,174		\$ 687,622		\$ 1,572,796
	, SHIELDWIRE, OPGW				ψ 003,17 1		ψ 007,022		Ų 1,572,730
	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.1	(1) OPGW 36 Fiber AC-33/38/571		LF	\$ 1.35		\$ 5.00	\$ -	\$ 6.35	
4.2	(1) 3/8" EHS7 Steel	-	LF	\$ 0.47		\$ 5.00	\$ -	\$ 5.47	
	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$ 0.47		\$ 30,000	\$ -	\$ 30,000.00	
4.6	Remove Existing OPGW Cable	-	Mile	\$ -		\$ 12,000	\$ -	\$ 12,000.00	
4.7	Remove Existing EH7		Mile	\$ -		\$ 12,000	\$ -	\$ 12,000.00	
	115kV - (1) 795kcmil 26/7 ACSS "Drake"	-	LF	\$ 1.72		\$ 5.00	\$ -	\$ 6.72	
4.9	113KV (1) 735KCHIII 20) 7 ACSS BIUKC	-		3 1.72	*	ÿ 5.00	<u> </u>	Ų 0Z	Ť
	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
	Rider Poles	-	EA	\$ 1,750	'	\$ 3,500	\$ -	\$ 5,250.00	
	CTOR, SHIELDWIRE, OPGW:			7 -,	\$ -	7 0,000	\$ -	7 3,200.00	\$ -
	FITTINGS, HARDWARE								
	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
	115kV Tangent (1-Group of 9-Bells Each Assembly)	12	Assembly	\$ 900		\$ 560	\$ 6,720		
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	255	Assembly	\$ 1,800		\$ 720	\$ 183,600		
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900			\$ -	\$ 1,460	
	OPGW Assembly - Tangent	16	Assembly	\$ 200		\$ 150	\$ 2,400		
	OPGW Assembly - Angle / DE	4	Assembly	\$ 250	\$ 1,000	\$ 150	\$ 600	\$ 400	\$ 1,600
	OHSW Assembly - Tangent	16	Assembly	\$ 200		\$ 150	\$ 2,400		
5.8	OHSW Assembly - Angle / DE	4	Assembly	\$ 250	\$ 1,000	\$ 150	\$ 600	\$ 400	\$ 1,600
	OPGW Splice Boxes	1	Set	\$ 1,750	\$ 1,750	\$ 1,746	\$ 1,746	\$ 3,496	\$ 3,496
	OPGW Splice & Test	1	EA	\$ 1,400			\$ 2,520		
	Spacer - Conductor	-	EA	\$ 50		7	\$ -	\$ 85	
	Vibration Dampers - Conductor	-	EA	\$ 35		7	\$ -	\$ 70	
5.13	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$ 27	\$ -	\$ 35	\$ -	\$ 62	\$ -
5.14	Guys, Anchors, and Accessories	-	EA	\$ 720	\$ -	\$ 885	\$ -	\$ 1,605	\$ -
	Misc. materials (Signs and Markers)	-	Mile	\$ 770		\$ 1,006	\$ -	\$ 1,776	
5.16					\$ -		\$ -		\$ -
5.17					\$ -		\$ -		\$ -
5.18					\$ -		\$ -		\$ -
5.19					\$ -		\$ -		\$ -
5.20					\$ -		\$ -		\$ -
TOTAL INICIAL	TOR, FITTINGS, HARDWARE				\$ 481,350		\$ 200,586		\$ 681,936

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Sup	oply Rate	Material	Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	rconnection Churchtown Station					\$	2,227,652		\$ 2,885,889		\$ 5,113,541
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$	-	\$ 51,135	\$ 51,135	\$ 51,135	\$ 51,135
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS					\$ 317,904	\$ 317,904	\$ 317,904	\$ 317,904
6.3	Utility PM and Project Oversite	1	LS			\$	-	\$ 51,135	\$ 51,135	\$ 51,135	\$ 51,135
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$	-	\$ 51,135	\$ 51,135	\$ 51,135	\$ 51,135
	Engineering							,	,		
6.5	Design Engineering	1	LS	\$	-	\$	-	\$ 255,677	\$ 255,677	\$ 255,677	\$ 255,677
6.6	LiDAR	1	LS	\$	-	\$	-	\$ 15,341	\$ 15,341	\$ 15,341	\$ 15,341
6.7	Geotech	1	Location	\$	-	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$	-	\$ 35,795	\$ 35,795	\$ 35,795	\$ 35,795
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$	-	\$	-	\$ 40,000	\$ -	\$ 40,000	\$ -
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 15,341	\$ 15,341	\$ 15,341	\$ 15,341
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.17	Carrying Charges	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$
6.18	Sales Tax on Materials	1	LS	\$	178,212	\$	178,212	\$ -	\$ -	\$ 178,212	\$ 178,212
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		·	\$	-	\$ 5,114	\$ 5,114	\$ 5,114	\$ 5,114
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	178,212		\$ 802,077	,	\$ 980,289

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M. In. Churchtown SS

NextEra T022 (Segment B) N. Interconnection Milan Station

NextEra T022 (Seg	ment B)			
		Supply	Installation	Total
N. Interconnection Milan Station				
1. CLEARING & ACCESS	\$	-	\$ 121,100	\$ 121,100
2. FOUNDATIONS	\$	84,375	\$ 135,279	\$ 219,654
3. STRUCTURES	\$	130,328	\$ 88,667	\$ 218,994
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	45,200	\$ 18,480	\$ 63,680
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	20,792	\$ 100,860	\$ 121,652
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$
SUBTOTAL:	\$	280,695	\$ 464,385	\$ 745,080
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -

Description	of Work:								
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Inter	connection Milan Station								
1. CLEARING	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	1.0	Acre	\$ -	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	500.0	LF	\$ -	\$ -	\$ 4	\$ 2,000	\$ 4	\$ 2,000
1.5	Matting - Access and ROW	500.0	LF	\$ -	\$ -	\$ 70	\$ 35,000	\$ 70	\$ 35,000
1.6	Matting - To Work Area	525.0	LF	\$ -	\$ -	\$ 70	\$ 36,750	\$ 70	\$ 36,750
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	10,000.0	SF	\$ -	\$ -	\$ 4	\$ 35,200	\$ 4	\$ 35,200
1.10	Restoration for Work Pad areas	2,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 300	\$ 0	\$ 300
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEA	RING & ACCESS				\$ -		\$ 121,100		\$ 121,100
2. FOUNDATI	ONS								
2.1	Drilled Pier - 115kV Single Circuit Single Pole Angle/DE	2	EA	\$ 42,187	\$ 84,375	\$ 42,639	\$ 85,279	\$ 84,827	\$ 169,654
2.2									
2.3									
2.4									
2.5	Rock Excavation Adder	25	СУ	\$ -	\$ -	\$ 2,000	\$ 50,000	\$ 2,000	\$ 50,000
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10 2.11					\$ -		\$ -		\$ - \$ -
2.11		1	l	1	1 2 -	1	- دا	1	- د ا

Total: \$ 745,080

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Estimate

Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		\$ -
2.14					\$ -		\$ -		\$ -
2.15	DATIONS				\$ -		\$ -		\$ -
TOTAL - FOUN 3. STRUCTURE					\$ 84,375		\$ 135,279		\$ 219,654
3.1	115kV Single Circuit Single Pole Angle/DE	2	Structure	\$ 64,658	\$ 129,316	\$ 38,795	\$ 77,590	\$ 103,453	\$ 206,905
3.2		_		7 0,,000		7 00,100	*,555	200,100	,
3.3									
3.4					\$ -		\$ -		\$ -
3.5	Install Grounding and Grounding Accessories	2	Pole	\$ 506		\$ 5,539			\$ 12,089
3.6					\$ -		\$ -		\$ -
3.7					\$ -		\$ - \$ -		\$ - \$ -
3.9					\$ -		\$ -		, - \$ -
3.10					\$ -		\$ -		\$ -
3.11					\$ -		\$ -		\$ -
3.12					\$ -		\$ -		\$ -
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
TOTAL - STRUC	TURES				\$ 130,328		\$ 88,667		\$ 218,994
	R, SHIELDWIRE, OPGW								
	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90		\$ 5.00			\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel	-	LF	\$ 1.35	+ '	\$ 5.00	\$ -		\$ - \$ -
4.3	Remove Existing 115kV Cable From Existing Structures	-	LF Mile	\$ 0.47	\$ - \$ -	\$ 5.00 \$ 30,000	\$ - \$ -		\$ - \$ -
4.6	Remove Existing OPGW Cable	-	Mile	\$ -	\$ -	\$ 12,000	\$ -		\$ - \$ -
4.7	Remove Existing EH7	-	Mile	\$ -	\$ -	\$ 12,000	\$ -		\$ -
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	\$ -	\$ 5.00	\$ -		, \$ -
4.9		-							
4.10	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500			\$ -
4.11	Rider Poles	-	EA	\$ 1,750		\$ 3,500		\$ 5,250.00	•
	JCTOR, SHIELDWIRE, OPGW: FITTINGS, HARDWARE				\$ -		\$ -		\$ -
	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900		\$ 560			\$ -
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	24	Assembly	\$ 1,800	\$ 43,200	\$ 720		, , , , ,	\$ 60,480
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900	\$ -	\$ 560	\$ -	\$ 1,460	\$ -
5.5		-	Assembly			\$ 360	\$ -		\$ -
	OPGW Assembly - Tangent	-	Assembly	\$ 200	<u> </u>	\$ 150			\$ -
	OPGW Assembly - Angle / DE	4	Assembly	\$ 250					\$ 1,600
	OHSW Assembly - Tangent OHSW Assembly - Angle / DE	- 4	Assembly Assembly	\$ 200 \$ 250		\$ 150 \$ 150			\$ - \$ 1,600
	OPGW Splice Boxes	- 4	Set	\$ 1,750	\$ 1,000	\$ 1,746			\$ 1,600 \$ -
5.11	OPGW Splice & Test	-	EA	\$ 1,400	Ψ	\$ 2,520			\$ -
5.12	Spacer - Conductor	-	EA	\$ 50		\$ 35			\$ -
5.13	Vibration Dampers - Conductor	-	EA	\$ 35	\$ -	\$ 35	\$ -	\$ 70	\$ -
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$ 27	\$ -	\$ 35	\$ -	\$ 62	\$ -
5.15	Guys, Anchors, and Accessories	-	EA	\$ 720	\$ -	\$ 885	\$ -	\$ 1,605	\$ -
5.16	Misc. materials (Signs and Markers)	-	Mile	\$ 770		\$ 1,006	\$ -		\$ -
5.17									
5.18									
5.19 5.20				-	-				
	ATOR, FITTINGS, HARDWARE				\$ 45,200		\$ 18,480		\$ 63,680
	onnection Milan Station				\$ 259,903		\$ 363,525		623,428
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 6,234	\$ 6,234	\$ 6,234	\$ 6,234
	Project Management, Material Handling & Amenities								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	еМ	Naterial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 38,758	\$ 38,758	\$ 38,758	\$ 38,758
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 6,234	\$ 6,234	\$ 6,234	\$ 6,234
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 6,234	\$ 6,234	\$ 6,234	\$ 6,234
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 31,171	\$ 31,171	\$ 31,171	\$ 31,171
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 1,870	\$ 1,870	\$ 1,870	\$ 1,870
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 4,364	\$ 4,364	\$ 4,364	\$ 4,364
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 1,870	\$ 1,870	\$ 1,870	\$ 1,870
6.13	Real Estate Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Carrying Charges	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$ 20,79	2 \$	20,792	\$ -	\$ -	\$ 20,792	\$ 20,792
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 623	\$ 623	\$ 623	\$ 623
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	20,792		\$ 100,860		\$ 121,652

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NextEra - T022 - (Segment B)

O. System Upgrade Facilities (Cricket Valley to Long Mt. Line)

Estimate Revision: Total: \$ 3,943,950

SYSTEM UPG	YSTEM UPGRADE FACILITIES		Unit of Measure	Material Supply Rate	Material Supply Rate Material Supply Sum		Labor & Equipment Sum	Total Unit Rate	TOTAL	
SUF 1	Transmission Line Upgrade Cricket Valley - Connecticut Border to Long Mountain (3.3 + 6.0 = 9.3 Miles)									
1.1	345kV - (1) 954kcmil 45/7 ACSS "Rail" Conductor (Cricket Vly to Conn Border)	109,771.20	LF	\$ 2.50	\$ 274,428	\$ 5.00	\$ 548,856	\$ 8	\$ 823,284	
1.2	345kV - (1) 2312kcmil 76/19 ACSS "Thrasher" Conductor (Conn Border to Long Mtn.)	99,792.00	LF	\$ 8.00	\$ 798,336	\$ 5.00	\$ 498,960	\$ 13	\$ 1,297,296	
1.3	Remove Existing 795 ACSS Conductor and Accessories (Cricket Vly to Conn Border)	3.30	Mile	\$ -	\$ -	\$ 30,000.00	\$ 99,000	\$ 30,000	\$ 99,000	
1.4	Remove Existing 2156kmil ACSS Conductor and Accessories (Conn Border to Long Mtn.)	6.00	Mile	\$ -	\$ -	\$ 30,000.00	\$ 180,000	\$ 30,000	\$ 180,000	
1.5	Rider Poles	10.00	Sets	\$ 1,750.00	\$ 17,500	\$ 3,500.00	\$ 35,000	\$ 5,250	\$ 52,500	
1.6	345kV Vertical Tangent Insulator Assembly	147.00	Assembly	\$ 1,800.00	\$ 264,600	\$ 720.00	\$ 105,840	\$ 2,520	\$ 370,440	
1.7	345kV Deadend Insulator Assembly	132.00	Assembly	\$ 1,800.00	\$ 237,600	\$ 720.00	\$ 95,040	\$ 2,520	\$ 332,640	
	Subtotal SUG 1 Direct Cost				\$ 1,592,464		\$ 1,562,696		\$ 3,155,160	
2	Indirect Cost (25% of Direct Cost)				\$ 398,116		\$ 390,674		\$ 788,790	
	TOTAL:				\$ 1,990,580		\$ 1,953,370		\$ 3,943,950	

	NextEra T022 (Segment B)
	ESTIMATE ASSUMPTIONS & CLARIFICATIONS
1	Cost Estimate is based on 2017 rates.
2	Construction schedule is in accordance with proposed schedule - we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
3	We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
4	All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
5	We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type. 20% of the total length of the line is assumed to use Type 1 Gravel road and 80% of the line length access to be used wood matting. In addition 75 feet of wood matting is included from the access matting to the work pad area matting. The estimate also include 5,000 square feet of wood matting for each structure work area within the ROW. For the ground restoration (seed, straw and woven mat), 20% of the work pad area included.
6	Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
7	Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
8	Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
9	A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
10	We have assumed that all project details provided are accurate unless noted otherwise.
11	Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
12	A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
13	A contractor allowance of 5.406% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
14	An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
15	A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
16	An allowance of 5% for transmission design and engineering has been included in the total section.
17	An allowance of 8% for substation design and engineering has been included in the total section.
18	An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
19	An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
20	An allowance of 3.75% for substation testing and commissioning has been included in the total section.
21	An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
22	New York state sales tax of 8% is included in all material pricing.
23	An allowance of 1.5% for insurance is included in the DPS sheet.
24	From Churchtown to Pleasant Valley only one line of Lattice Structures is to be removed.
25	From Churchtown to Pleasant Valley; Churchtown loop around 345kV conductor 0.3 miles have been added.
26	An additional Quantity of 5% have been added to conductors, OPGW, & OHSW for sag and jumpers.
27	Rock excavation not provided in proposal foundation data, most of the foundation are concrete pole direct embedded, rock excavation assumed 50% for T022 (Churchtown to Pleasant Valley) and rest 75% of quantities of National Grid's proposal.
	Cricket Valley to Long Mountain line upgrade: The length of the re-conductor between Cricket Valley and the NY/CT border is 3.3 miles and will remove the existing (to be installed on CV project) 2 bundle 795 ACSS conductor and install new 2 bundle Rail 954 ACSS conductor.
20	-The length of the re-conductor between the NY/CT border and Long Mountain is 6 miles and will remove the existing single 2156 ACSS conductor and install new single Thrasher 2312 ACSS conductor.
28	
	-The Insulators and associated conductor hardware will be replaced.
	-The existing structures are assumed to have adequate strength to support the new conductors.
20	-The estimate is a rough order of magnitude estimate as no engineering was performed and SECo did not have access to record drawings.
29	The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.

Assumptions & Clarifications



		NextEra Energy (T023)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$34,215
	1.2	Foundations	\$21,257
	1.3	Structures	\$67,904
	1.4	Conductor, Shiedwire and OPGW	\$30,529
	1.5	Insulators, Fitting and Hardwares	\$11,349
		Subtotal (1)	\$165,255
, t	2	Substations	
Direct Cost	2.1	Knickerbocker Substation	\$15,110
rect	2.2	East Greenbush Substation	\$61
ΙÖ	2.3	Schodack Substation	\$0
	2.4	Churchtown Substation	\$13,040
	2.5	Pleasant Valley Substation	\$2,798
	2.6	Substation Interconnections	\$6,473
		Subtotal (2)	\$37,482
		Total (1+2)	\$202,736
		Contractors Mark-up (15% of Total 1+2)	\$30,410
		Total Direct Cost (A)	\$233,147
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,027
st	3.2	Project Management, Material Handling & Amenities	\$16,697
Indirect Cost	3.3	Engineering	\$13,253
direc	3.4	Testing & Commissioning	\$874
luc	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$12,954
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628
		Total Indirect Cost (3)	\$53,433
		Subtotal Project Cost (B=A+3) 2017 \$	\$286,580
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project	\$0
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417
		Subtotal NUF Cost (C)	\$4,417
		Total Project Cost (B+C) 2017 \$	\$290,997
		Total Project Cost 2018 \$	\$299,727

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NextEra T023 (Segment B Alternate)

Estimate Revision: 5

	NextEra T023 (Segment B Alternate) - Direct Costs	To	otal Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Knickerbocker to Churchtown	\$	59,787,815
Direct Labor, Material & Equipment Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	100,720,518
Direct Labor, Material & Equipment Costs	C. Blue Stores Junction to Blue Stores Substation	\$	4,746,361
Direct Labor, Material & Equipment Costs	D. Knickerbocker 345kV Substation - Install	\$	15,109,913
Direct Labor, Material & Equipment Costs	E.	\$	-
Direct Labor, Material & Equipment Costs	F.	\$	-
Direct Labor, Material & Equipment Costs	G.	\$	-
Direct Labor, Material & Equipment Costs	H. North Churchtown Substation - Install	\$	13,039,784
Direct Labor, Material & Equipment Costs	I. Greenbush Substation - Removal	\$	61,200
Direct Labor, Material & Equipment Costs	J. Pleasant Valley Substation - Install	\$	2,797,952
Direct Labor, Material & Equipment Costs	K.	\$	-
Direct Labor, Material & Equipment Costs	L. Interconnection Knickerbocker Station	\$	1,534,845
Direct Labor, Material & Equipment Costs	M. Interconnection Churchtown Station	\$	4,339,656
Direct Labor, Material & Equipment Costs	N. Interconnection Milan Station	\$	598,228
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Cricket Valley Line Upgrade)	\$	3,155,160
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Various Stations Knickerbocker to Pleasant Valley)	\$	-
	SUBTOTAL:	\$	205,891,432
	CONTRACTOR MARK-UP (OH&P)	\$	30,883,715
	CONTINGENCY ON ENTIRE PROJECT	\$	-
	TOTAL DIRECT:	\$	236,775,147

	NextEra T023 (Segment B Alternate) - Indirect Costs	Tota	al Each Segment
Indirect Costs	A. Transmission Line Knickerbocker to Churchtown	\$	13,640,683
Indirect Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	21,913,317
Indirect Costs	C. Blue Stores Junction to Blue Stores Substation	\$	1,004,213
Indirect Costs	D. Knickerbocker 345kV Substation - Install	\$	4,011,148
Indirect Costs	E.	\$	-
Indirect Costs	F.	\$	-
Indirect Costs	G.	\$	-
Indirect Costs	H. North Churchtown Substation - Install	\$	3,246,034
Indirect Costs	I. Greenbush Substation - Removal	\$	9,439
Indirect Costs	J. Pleasant Valley Substation - Install	\$	728,830
Indirect Costs	K. Pleasant Valley Substation - Removal	\$	-
Indirect Costs	L. Interconnection Knickerbocker Station	\$	292,345
Indirect Costs	M. Interconnection Churchtown Station	\$	843,122
Indirect Costs	N. Interconnection Milan Station	\$	116,394
Indirect Costs	O. System Upgrade Facilities (Cricket Valley Line Upgrade)	\$	788,790
Indirect Costs	P. System Upgrade Facilities (Various Stations Knickerbocker to Pleasant Valley)	\$	-
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitigation)	\$	7,627,609
	TOTAL IND	RECT: \$	54,221,924

TOTAL ESTIMATED COST: \$ 290,997,071

A. Transmission Line Knickerbocker to Churchtown

NextEra T023 (Segment B Alternate)

Estimate Revision:

5

Total: \$ 73,428,499

NextEra T023 (Segn	nent B Alternate)					
		Supply	I.	nstallation		Total
A. Transmission Line Knickerbocker to Churchtown						
1. CLEARING & ACCESS	\$	11,500	\$	13,208,953	\$	13,220,453
2. FOUNDATIONS	\$	1,519,868	\$	4,432,528	\$	5,952,396
3. STRUCTURES	\$	4,990,679	\$	19,604,107	\$	24,594,786
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	2,943,787	\$	8,681,855	\$	11,625,642
5. INSULATORS, FITTINGS, HARDWARE	\$	2,896,560	\$	1,497,978	\$	4,394,539
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	988,992	\$	12,651,692	\$	13,640,683
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	13,351,386	\$	60,077,113	\$	73,428,499
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	13.351.386	\$	60.077.113	Ś	73.428.499

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Transı	mission Line Knickerbocker to Churchtown								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	19.0	Acre	\$ -	\$ -	\$ 15,000	\$ 285,000	\$ 15,000	\$ 285,000
1.2	Clearing the ROW - Light (mowing)	61.0	Acre		\$ -	\$ 5,000			
1.3	Permanent Access Road	23,126	LF	\$ -	\$ -	\$ 45.00			
	Silt Fence	115,632	LF	\$ -	\$ -	\$ 4.00			\$ 462,528
	Matting - Access and ROW	92,506	LF	\$ -	\$ -	\$ 70.00			
	Matting - To Work Area	11,925	LF	\$ -	\$ -	\$ 70.00			\$ 834,750
1.7	Snow Removal	21.9	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	21.9	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	795,000	SF	\$ -	\$ -	\$ 3.52			\$ 2,798,400
1.10	Restoration for Work Pad areas	159,000	SF	\$ -	\$ -	\$ 0.15			\$ 23,850
1.11	Temporary Access Bridge	9	EA	\$ -	\$ -	\$ 20,035			
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
	Stabilized Construction Entrance Maintenance and Protection of Traffic on Public Roads	4 47		\$ - \$ -	\$ -	\$ 4,580 \$ 4,130			
	Culverts / Misc. Access	10		\$ 75	, , , , , , , , , , , , , , , , , , ,				
1.15	Gates	2	EA EA	\$ 75					
	Concrete Washout Station	2	EA	\$ 2,00	\$ 4,000	\$ 2,500			
	ING & ACCESS:	2	LA	, -	\$ 11,500		\$ 13,208,953	\$ 1,650	\$ 13,220,453
2. FOUNDATIO					3 11,500		3 13,206,933		3 13,220,433
2. FOUNDATIO	N3								
2.1	Drilled Pier - 115/345KV D/C DEADEND, STEEL	13	EA	\$ 86,96	\$ 1,130,593	\$ 87,900	\$ 1,142,702	\$ 174,869	\$ 2,273,295
2.2	Drilled Pier - 345KV S/C DEADEND, STEEL	1	EA	\$ 39,77	\$ 39,770	\$ 40,196	\$ 40,196	\$ 79,966	\$ 79,966
2.3	Direct Embed - 115/345KV D/C TANGENT, CONCRETE	145	EA	\$ 2,41	\$ 349,504	\$ 16,391	\$ 2,376,630	\$ 18,801	\$ 2,726,134
2.4	Rock Excavation Adder	436.5	СУ	\$ -	\$ -	\$ 2,000	\$ 873,000	\$ 2,000	\$ 873,000
2.5									
2.6									
2.7									
2.7									+
2.9									
2.10									
2.11									
2.12									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
2.13									
2.14									
2.15									
2.16									I
2.17									
2.18									
TOTAL - FOUN	DATIONS:				\$ 1,519,868		\$ 4,432,528		\$ 5,952,396
3. STRUCTURE					7 2,020,000		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		+
	115/345KV D/C DEADEND, STEEL	13	Structure	\$ 131,581	\$ 1,710,556	\$ 78,949	\$ 1,026,334	\$ 210,530	\$ 2,736,890
	345KV S/C DEADEND, STEEL	1	Structure	\$ 51,800	\$ 51,800	\$ 31,080			
3.3	115/345KV D/C TANGENT, CONCRETE	145	Structure	\$ 21,709		\$ 91,587			
3.5	113/343KV B/C PANGENT, CONCRETE	143	Structure	\$ 21,705	ÿ 3,147,003	ÿ 51,567	3 13,200,072	ÿ 113,230	7 10,427,540
3.4	Remove Existing Foundation	688	EA	\$ -	\$ -	\$ 3,250	\$ 2,236,000		\$ 2,236,000
3.5	Remove Existing Structure and Accessories	172	EA	\$ -	\$ -	\$ 12,500			\$ 2,150,000
3.6	Install Grounding and Grounding Accessories	159	Pole	\$ 506	\$ 80,454	\$ 5,539	\$ 880,622	\$ 6,045	\$ 961,076
3.7									
3.8									
3.9									i
3.10									·
3.11									
3.12									i
3.13									
									1
3.14									
3.15									
TOTAL - STRUC					\$ 4,990,679		\$ 19,604,107		\$ 24,594,786
-	R, SHIELDWIRE, OPGW								
4.1	345kV - (1) 1,033kcmil 54/7 ACSS "Curlew"	728,482	LF	\$ 2.82		\$ 5.00			
4.2	(1) OPGW 36 Fiber AC-33/38/571	121,414	LF	\$ 1.35		\$ 5.00			
4.3	(1) 3/8" EHS7 Steel	121,414	LF	\$ 0.47	\$ 57,065	\$ 5.00			
4.4	Remove Existing Cable From Existing Structures	43.8	Mile	\$ -	\$ -	\$ 30,000			
4.5	Remove Existing OPGW Cable and Accessories	21.9	Mile	\$ -	\$ -	\$ 12,000	\$ 262,800		\$ 262,800
4.6	Remove Existing OHSW and Accessories	21.9	Mile	\$ -	\$ -	\$ 12,000	\$ 262,800	\$ 12,000.00	\$ 262,800
4.7	115kV - (1) 795kcmil 26/7 ACSS "Drake"	364,241	LF	\$ 1.72	\$ 626,495	\$ 5.00	\$ 1,821,205		\$ 2,447,700
4.8	Rider Poles (47 Locations)	24	Set	\$ 1,750	\$ 42,000	\$ 3,500	\$ 84,000	\$ 5,250.00	\$ 126,000
4.9	Rider Poles - Relocated	23	Set	\$ -	\$ -	\$ 3,500	\$ 80,500	\$ 3,500.00	\$ 80,500
4.10									
4.11									1
4.12									
4.13									
4.14									1
4.15									1
4.16									
4.17									
TOTAL: CONDI	JCTOR, SHIELDWIRE, OPGW:				\$ 2,943,787		\$ 8,681,855		\$ 11,625,642
5. INSULATOR,	FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	725	Assembly	\$ 1,800	\$ 1,305,000	\$ 720	\$ 522,000	\$ 2,520	\$ 1,827,000
	115kV Tangent (1-Group of 9-Bells Each Assembly)	870	Assembly	\$ 900		\$ 560			
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	210	Assembly	\$ 1,800					
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	91	Assembly	\$ 900					
5.5		1			\$ -	. 300	\$ -		\$ -
5.6					\$ -		\$ -		
5.7					\$ -		\$ -		\$ -
5.8	OPGW Assembly - Tangent	145	Assembly	\$ 200	\$ 29,000	\$ 150	\$ 21,750	\$ 350	\$ 50,750
	OPGW Assembly - Angle / DE	28	Assembly	\$ 250					

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
5.10	OHSW Assembly - Tangent	145	Assembly	\$ 200	\$ 29,000	\$ 150	\$ 21,750	\$ 350	\$ 50,750
5.11	OHSW Assembly - Angle / DE	28	Assembly	\$ 250	\$ 7,000		\$ 4,200		\$ 11,200
5.12	OPGW Splice Boxes	8	Set	\$ 1,746	\$ 13,969	\$ 2,274	\$ 18,192	\$ 4,020	\$ 32,161
5.13	OPGW Splice & Test	8	EA	\$ 2,520	\$ 20,160	\$ 2,520	\$ 20,160	\$ 5,040	\$ 40,320
5.14	Spacer - Conductor	3,659	EA	\$ 50	\$ 182,950	\$ 35	\$ 128,065	\$ 85	\$ 311,015
5.15	Vibration Dampers - Conductor	878	EA	\$ 35	\$ 30,730	\$ 35	\$ 30,730	\$ 70	\$ 61,460
5.16	Shield wire / OPGW Dampers, Misc. Fittings	444	EA	\$ 27	\$ 11,988	\$ 35	\$ 15,540	\$ 62	\$ 27,528
5.17									
5.18									
5.19									
5.20									
5.21	Guys, Anchors, and Accessories	-	EA	\$ 720	\$ -	\$ 885	\$ -	\$ 1,605	\$ -
5.22	Misc. materials (Signs and Markers)	21.9	Mile	\$ 770	\$ 16,863	\$ 1,006	\$ 22,031	\$ 1,776	\$ 38,894
5.23		-		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - INSU	LATORS, FITTINGS, HARDWARE:				\$ 2,896,560		\$ 1,497,978		\$ 4,394,539
A. Trans	smission Line Knickerbocker to Churchtown				\$ 12,362,395		\$ 47,425,421		\$ 59,787,815
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 597,878	\$ 597,878	\$ 597,878	\$ 597,878
	Project Management, Material Handling & Amenities	_		-	1	7 20.75.0	7 501,515	7	, ,,,,,,,
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 3,728,637	\$ 3,728,637	\$ 3,728,637	\$ 3,728,637
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 597,878	\$ 597,878	\$ 597,878	\$ 597,878
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 597,878	\$ 597,878	\$ 597,878	\$ 597,878
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 2,989,391	\$ 2,989,391	\$ 2,989,391	\$ 2,989,391
6.6	Lidar	1	LS	\$ -	\$ -	\$ 179,363	\$ 179,363	\$ 179,363	\$ 179,363
6.7	Geotech	22	Location	\$ -	\$ -	\$ 3,500	\$ 77,000	\$ 3,500	\$ 77,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 418,515	\$ 418,515	\$ 418,515	\$ 418,515
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 179,363	\$ 179,363	\$ 179,363	\$ 179,363
6.13	Real Estate Costs (New ROW)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 3,186,000	\$ 3,186,000	\$ 3,186,000	\$ 3,186,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 988,992	\$ 988,992	\$ -	\$ -	\$ 988,992	\$ 988,992
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 59,788	\$ 59,788	\$ 59,788	\$ 59,788
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 988,992		\$ 12,651,692		\$ 13,640,683

NextEra T023 (Segment B Alternate)

B. Transmission Line Churchtown to Pleasant Valley

Estimate Revision: 5 Total: \$ 122,633,835

NextEra T023 (Segm	ent B Alterna	te)				
		Supply		Installation		Total
B. Transmission Line Churchtown to Pleasant Valley						
1. CLEARING & ACCESS	\$	14,000	\$	19,576,466	\$	19,590,466
2. FOUNDATIONS	\$	1,639,170	\$	12,502,886	\$	14,142,057
3. STRUCTURES	\$	6,814,286	\$	34,951,509	\$	41,765,796
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,421,997	\$	15,009,440	\$	18,431,437
5. INSULATORS, FITTINGS, HARDWARE	\$	4,481,834	\$	2,308,928	\$	6,790,763
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,309,703	\$	20,603,613	\$	21,913,317
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	17,680,991	\$	104,952,843	\$	122,633,835
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	17.680.991	Ś	104.952.843	Ś	122.633.835

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Trans	mission Line Churchtown to Pleasant Valley									
1. CLEARING 8										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	98.0	Acre	\$	-	\$ -	\$ 5,000	\$ 490,000	\$ 5,000	\$ 490,000
1.3	Permanent Access Road	34,108.8	LF	\$	-	\$ -	\$ 45			1,534,896
1.4	Silt Fence	170,544.0	LF	\$	-	\$ -		\$ 682,176		\$ 682,176
1.5	Matting - Access and ROW	136,435.2	LF	\$	-	\$ -	\$ 70		\$ 70	9,550,464
1.6	Matting - To Work Area	18,750.0	LF	\$	-	\$ -	\$ 70			1,312,500
1.7	Snow Removal	32.3	Mile	\$	-	\$ -	\$ 16,000		\$ 16,000	516,800
1.8	ROW Restoration	32.3	Mile	\$	-	\$ -	\$ 10,000		\$ 10,000	323,000
1.9	Work Pads	1,250,000.0	SF	\$	-	\$ -		\$ 4,400,000		\$ 4,400,000
1.10	Restoration for Work Pad areas	250,000.0	SF	\$	-	\$ -	\$ 0.2			37,500
1.11	Temporary Access Bridge	14	EA	\$	-	\$ -	\$ 20,035			280,490
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445		\$ 14,445	-
1.13	Stabilized Construction Entrance	12	EA	\$	-	\$ -	\$ 4,580			54,960
1.14	Maintenance and Protection of Traffic on Public Roads	86	EA	\$	-	\$ -	\$ 4,130			355,180
1.15	Gates	4	EA	\$	2,000	\$ 8,000				18,000
1.16	Culverts / Misc. Access	8	EA	\$	750					16,000
1.17	Concrete Washout Station	10	EA	\$	-	\$ -	\$ 1,850	\$ 18,500	\$ 1,850	18,500
	RING & ACCESS:					\$ 14,000		\$ 19,576,466		\$ 19,590,466
2. FOUNDATIO	DNS T									
2.1	Drilled Pier - 345KV S/C DEADEND, STEEL	6	EA	\$	50,485	\$ 302,911	\$ 51,026	\$ 306,156	\$ 101,511	\$ 609,067
2.2	Drilled Pier - 345KV S/C DEADEND, STEEL	15	EA	\$	64,923	\$ 973,838	\$ 65,618	\$ 984,267	\$ 130,540	\$ 1,958,105
2.3	Direct Embed - 115/345KV D/C TANGENT, CONCRETE	229	EA	\$	1,583	\$ 362,421	\$ 10,762	\$ 2,464,464	\$ 12,344	\$ 2,826,885
2.4										
2.5	Rock Excavation Adder	4,374.0	СҮ	\$	-	\$ -	\$ 2,000	\$ 8,748,000	\$ 2,000	\$ 8,748,000
2.6										
2.7										
2.8										
2.9										
2.10				+						
2.11										
2.12										
TOTAL - FOUN	DATIONS:					\$ 1,639,170		\$ 12,502,886		\$ 14,142,057

Item	Item Description	Estimated Quantity	Unit of Measure	Ma	aterial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
3. STRUCTURE	S										
3.1	345KV S/C DEADEND, STEEL	6	Structure	\$	90,765	\$ 544,588	\$ 54,459	\$ 326,753	\$ 145,224	\$	871,341
3.2	345KV S/C DEADEND, STEEL	15	Structure	\$	120,698	\$ 1,810,466	\$ 72,419	\$ 1,086,279	\$ 193,116	\$	2,896,745
3.3	115/345KV D/C TANGENT, CONCRETE	229	Structure	\$	18,920	\$ 4,332,733	\$ 82,395	\$ 18,868,352	\$ 101,315	\$	23,201,085
3.4											
3.5											
3.6											
3.7											
3.8											
3.9											
3.10											
3.11											
3.11											
3.12	Remove Existing Foundation	2,084	EA	\$	-	\$ -	\$ 3,250	\$ 6,773,000	\$ 3,250	\$	6,773,000
3.13	Remove Existing Structure and Accessories	521	EA	\$	-	Ś -	\$ 12,500	\$ 6,512,500	\$ 12,500	\$	6,512,500
3.14	Install Grounding and Grounding Accessories	250	Structure	Ś	506	7	\$ 5,539	\$ 1,384,625		<u> </u>	1,511,125
3.15		250		+*	500	. 120,500	. 3,333	. 1,55 1,525	. 3,343	Ť	_,511,113
3.16											
3.17											
	CTURES PRINCTOWN TO NEW SCOTLAND:					\$ 6,814,286		\$ 34,951,509		\$	41,765,796
4. CONDUCTO	R, SHIELDWIRE, OPGW										
4.1	345kV - (1) 1,033kcmil 54/7 ACSS "Curlew"	1,094,386	LF	\$	1.90			\$ 5,471,930		_	7,551,263
4.2	(1) OPGW 36 Fiber AC-33/38/571	182,398	LF	\$	1.35			\$ 911,990		_	1,158,227
4.3	(1) 3/8" EHS7 Steel	182,398	LF	\$	0.47			\$ 911,990			997,717
4.5	Remove Existing 115kV Cable From Existing Structures	130.4	Mile	\$	-	\$ -	\$ 30,000	\$ 3,912,000		\$	3,912,000
4.6	Remove Existing OPGW Cable and Accessories	32.6	Mile	\$	-	\$ -	\$ 12,000		\$ 12,000.00	\$	390,600
4.7	Remove Existing OHSW and Accessories	32.6	Mile	\$	-	'	\$ 12,000	\$ 390,600		\$	390,600
4.8	115kV - (1) 795kcmil 26/7 ACSS "Drake"	543,866	LF	\$	1.72	\$ 935,450	\$ 5.00	\$ 2,719,330	\$ 6.72	\$	3,654,780
4.9		42		-			A 2.500	4 450 500	4 2500.00	_	
4.10	Rider Poles - Relocated	43	Set	\$	-	\$ -	\$ 3,500	\$ 150,500			150,500
4.11	Rider Poles (86 Total) UCTOR, SHIELDWIRE, OPGW:	43	EA	\$	1,750	\$ 75,250 \$ 3,421,997	\$ 3,500	\$ 150,500 \$ 15,009,440	\$ 5,250.00	\$	225,750 18,431,437
	, FITTINGS, HARDWARE					3,421,997		3 13,009,440		7	10,431,437
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,145	Assembly	\$	1,800	\$ 2,061,000	\$ 720	\$ 824,400	\$ 2,520	Ś	2,885,400
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	1,374	Assembly	\$	900		\$ 560	\$ 769,440		_	2,006,040
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	315	Assembly	\$	1,800		\$ 720	\$ 226,800			793,800
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	105	Assembly	\$	900	\$ 94,500	\$ 560	\$ 58,800			153,300
5.5	OPGW Assembly - Tangent	229	Assembly	\$	200	\$ 45,800	\$ 150	\$ 34,350			80,150
5.6	OPGW Assembly - Angle / DE	42	Assembly	\$	250	\$ 10,500	\$ 150	\$ 6,300	\$ 400	\$	16,800
5.7	OHSW Assembly - Tangent	229	Assembly	\$	200	\$ 45,800	\$ 150	\$ 34,350	\$ 350	\$	80,150
5.8	OHSW Assembly - Angle / DE	42	Assembly	\$	250	\$ 10,500	\$ 150	\$ 6,300	\$ 400	\$	16,800
5.9	OPGW Splice Boxes	12	Set	\$	1,746	\$ 20,954	\$ 2,274	\$ 27,288	\$ 4,020	\$	48,242
5.10	OPGW Splice & Test	12	EA	\$	2,520	\$ 30,240	\$ 2,520	\$ 30,240	\$ 5,040	\$	60,480
5.11	Spacer - Conductor	5,414	EA	\$	50	\$ 270,700	\$ 35	\$ 189,490	\$ 85	\$	460,190
5.12	Vibration Dampers - Conductor	1,299	EA	\$	35	\$ 45,465	\$ 35	\$ 45,465	\$ 70	\$	90,930
5.13	Shieldwire / OPGW Dampers, Misc. Fittings	656	EA	\$	27	\$ 17,712	\$ 35	\$ 22,960	\$ 62	\$	40,672
5.14	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.15	Misc. materials (Signs and Markers)	32.6	Mile	\$	770		\$ 1,006	\$ 32,745	\$ 1,776	\$	57,809
	ATORS, FITTINGS, HARDWARE:					\$ 4,481,834		\$ 2,308,928		\$	6,790,763
B. Trans	mission Line Churchtown to Pleasant Valley					\$ 16,371,288		\$ 84,349,230		\$	100,720,518
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 1,007,205	\$ 1,007,205	\$ 1,007,205	\$	1,007,205
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 6,281,385	\$ 6,281,385	\$ 6,281,385	\$	6,281,385

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	L
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 1,007,205	\$ 1,007,205	\$ 1,007,205	\$ 1,0	007,205
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 1,007,205	\$ 1,007,205	\$ 1,007,205	\$ 1,0	007,205
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 5,036,026	\$ 5,036,026	\$ 5,036,026	\$ 5,0	036,026
6.6	Lidar	1	LS	\$	-	\$ -	\$ 302,162	\$ 302,162	\$ 302,162	\$ 3	302,162
6.7	Geotech	33	Location	\$	-	\$ -	\$ 3,500	\$ 115,500	\$ 3,500	\$ 1	115,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 705,044	\$ 705,044	\$ 705,044	\$ 7	705,044
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 302,162	\$ 302,162	\$ 302,162	\$ 3	302,162
6.13	Real Estate Costs (New ROW)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ 4,699,000	\$ 4,699,000	\$ 4,699,000	\$ 4,6	699,000
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$	1,309,703	\$ 1,309,703	\$ -	\$ -	\$ 1,309,703	\$ 1,3	309,703
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 100,721	\$ 100,721	\$ 100,721	\$ 1	100,721
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,309,703		\$ 20,603,613		\$ 21,9	913,317

NextEra T023 (Segment B Alternate) C. Blue Stores Junction to Blue Stores Substation

NextEra T023 (Segment B Alternate) Installation Total Supply C. Blue Stores Junction to Blue Stores Substation 1. CLEARING & ACCESS 1,404,512 \$ 1,404,512 2. FOUNDATIONS 236,848 \$ 925,954 \$ 1,162,802 3. STRUCTURES 596,484 \$ 1,543,149 946,665 \$ 4. CONDUCTOR, SHIELDWIRE, OPGW 5. INSULATORS, FITTINGS, HARDWARE 84,763 \$ 387,095 \$ 471,858 107,544 \$ 56,496 \$ 164,040 6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: 82,051 \$ 922,162 \$ 1,004,213 Ś CONTRACTOR MARK-UP (OH&P) SUBTOTAL: 1,107,690 \$ 4,642,884 \$ 5,750,574 CONTINGENCY ON ENTIRE PROJECT

Description of Work:

TOTAL:

Estimate

Revision:

5

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Blue S	Stores Junction to Blue Stores Substation								
1. CLEARING 8	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	4.0	Acre	\$ -	\$ -	\$ 5,000	\$ 20,000	\$ 5,000	\$ 20,000
1.3	Permanent Access Road	2,218	LF	\$ -	\$ -	\$ 45			\$ 99,792
1.4	Silt Fence	11,088.0	LF	\$ -	\$ -		\$ 44,352		\$ 44,352
1.5	Matting - Access and ROW	8,870	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	1,800.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	2.1	Mile	\$ -	\$ -	\$ 16,000			\$ 33,600
1.8	ROW Restoration	2.1	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	120,000.0	SF	\$ -	\$ -		\$ 422,400		
1.10	Restoration for Work Pad areas	24,000.0	SF	\$ -	\$ -	\$ 0.2			
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	1	EA	\$ -	\$ -	\$ 4,580			
1.14	Maintenance and Protection of Traffic on Public Roads	2	EA	\$ -	\$ -	\$ 4,130			· /
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA		<u> </u>	\$ 1,250		\$ 2,000	\$ -
1.17	Concrete Washout Station	-	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
	RING & ACCESS:				\$ -		\$ 1,404,512		\$ 1,404,512
2. FOUNDATIO	DNS T								
2.1	Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE	6	EA	\$ 31,225	\$ 187,348	\$ 31,559	\$ 189,354	\$ 62,784	\$ 376,702
2.2	Direct Embed - 115kV Single Circuit H- Pole Tangent	18	EA	\$ 2,750	\$ 49,500	\$ 18,700	\$ 336,600	\$ 21,450	\$ 386,100
2.3	Rock Excavation Adder	200.0	СУ	\$ -	\$ -	\$ 2,000	\$ 400,000	\$ 2,000	\$ 400,000
2.4									
2.5									
2.6									
2.7									
2.8									
2.9									
2.10									
2.11									
2.12									
2.13									1

Total: \$ 5,750,574

SA Remove Existing Structure and Associations SA SA SA SA SA SA SA S	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
TOTAL - TOMOGRAPHORE											
		ATIONIC.						4			
1.1109/Simple Content Feed Angelo City 1.1209 5 29,827 5 29,827 5 21,829 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 24,289 5 2		ATIONS:				\$ 236,848		\$ 925,954		\$	1,162,802
23 1300 Single Content in Feed Engenet 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structure 18 Structu		1EkV Single Circuit H. Dole Angle / DE	6	Structuro	¢ 20.022	¢ 229.020	¢ 22.002	¢ 1/12.2E0	¢ 62.714	\$	382,287
3.3 Remove Costing Foruntary and Accessories 27										\$	533,226
3.4 Restance Losting Structure and Accessories											333,223
3.5 Session Grounding and Grounding Accessories	3.3 F	emove Existing Foundation	-	EA	\$ -	\$ -	\$ 7,500	\$ -	\$ 7,500	\$	-
3.5 Install Councing and Grounding Accessories	3.4 F	lemove Existing Structure and Accessories	27	EA	\$ -	\$ -	\$ 12,500	\$ 337,500	\$ 12,500	\$	337,500
3.8											
3.8		nstall Grounding and Grounding Accessories	48	Structure	\$ 506	\$ 24,288	\$ 5,539	\$ 265,848	\$ 6,045	\$	290,136
3.10											
3.10											
3.11											
3.12											
3.13											
3.31											-
CONDUCTOR_SHEDUME_OPGN 4.1 34584*-11) 94544*-13 5458*-13 5 500 5 5 5 5 5 5 5											
A.COMPUTOR. SHELDWIRE, OPEN											
4.1						\$ 596,484		\$ 946,665		\$	1,543,149
4.2 (1) OPGW 36 Fiber AC-33/38/S71											
4.3 (3) 3/8" EHS7 Steel	4.1 3	45kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$	-
## 4.4 ## 158W - (1) 795kcml 267 ACSR** Onches** ## 4.5	4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35	\$ -	\$ 5.00	\$ -	\$ 6.35	\$	-
4.5 (1) OPGW 36 Fiber AC-33/28/571	4.3	(1) 3/8" EHS7 Steel	-	LF	\$ 0.47	\$ -	\$ 5.00	\$ -	\$ 5.47	\$	-
4.0 (1) 3/6" EHS7 Steel	4.4 1	15kV - (1) 795kcmil 26/7 ACSR "Drake"	34,927.0	LF	\$ 1.72	\$ 60,074	\$ 5.00	\$ 174,635	\$ 6.72	\$	234,709
4.7 Remove Existing Cable 4.8 Remove Existing OFOW Cable and Accessories 5. Mile 5 \$ - \$ 12,000 \$ - \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000	4.5	(1) OPGW 36 Fiber AC-33/38/571	11,642.0	LF	\$ 1.35	\$ 15,717	\$ 5.00	\$ 58,210	\$ 6.35	\$	73,927
4.8 Remove Existing OPGW Cable and Accessories - Mile \$ - \$ \$ \$ \$ \$ \$ \$ \$	4.6	(1) 3/8" EHS7 Steel	11,642.0	LF	\$ 0.47	\$ 5,472	\$ 5.00	\$ 58,210	\$ 5.47	\$	63,682
4.8 Remove Existing OPGW Cable and Accessories -	4.7 F	lemove Existing Cable	2.1	Mile	\$ -	\$ -	\$ 30,000	\$ 63,600	\$ 30,000.00	\$	63,600
4.9 Remove Existing OHSW and Accessories 2.1 Mile \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			-	Mile	\$ -	\$ -		\$ -	\$ 12,000.00	\$	-
4.10	4.9	Remove Existing OHSW and Accessories	2.1	Mile	\$ -	\$ -	\$ 12,000	\$ 25,440	\$ 12,000.00	\$	25,440
4.11	4.10		-								
A.12 Rider Poles (Locations) 2.0 EA S 1,750 S 3,500 S 3,500 S 7,000 S 5,250.00	4.11		-								
4.13		ider Poles (Locations)	2.0	EA	\$ 1,750	\$ 3,500	\$ 3,500	\$ 7,000	\$ 5,250.00	\$	10,500
S. INSULATOR, HTTINGS, HARDWARE S. Assembly S. 1,800 S S. 720 S S. 2,52					,		,		,		
S. INSULATOR, FITTINGS, HARDWARE	AL - CONDU	CTOR, SHIELDWIRE, OPGW:				\$ 84,763		\$ 387,095		\$	471,858
5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 54 Assembly 5 900 5 48,600 5 360 5 19,440 5 1,260 5 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 36 Assembly 5 900 5 32,400 5 360 5 12,960 5 1,260 5 5 5 5 5 5 5 5 5	SULATOR, F	ITTINGS, HARDWARE									
5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) - Assembly \$ 1,800 \$ - \$ 720 \$ \$ 2,522 \$ 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 36 Assembly \$ 0 \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$ 1,260 \$ \$	5.1 3	45kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$	-
S.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 36 Assembly \$ 900 \$ 32,400 \$ 360 \$ 12,960 \$ 1,260 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$ 5.5 \$			54	Assembly					,	\$	68,040
S.5 Assembly S									, ,	\$	-
S.6 OPGW Assembly - Tangent S		15kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	36		\$ 900	<u> </u>	\$ 360				45,360
5.7 OPGW Assembly - Angle / DE 12 Assembly \$ 250 \$ 3,000 \$ 150 \$ 1,800 \$ 40		DCW Assamble Tangant	10		ć 300	-	ć 1F0			\$	6,300
5.8 OHSW Assembly - Tangent 18 Assembly \$ 200 \$ 3,600 \$ 150 \$ 2,700 \$ 35 5.9 OHSW Assembly - Angle / DE 12 Assembly \$ 250 \$ 3,000 \$ 150 \$ 1,800 \$ 4C 5.10 OPGW Splice Boxes 2 Set \$ 1,746 \$ 3,492 \$ 2,274 \$ 4,548 \$ 4,02 5.11 OPGW Splice & Test 2 EA \$ 2,520 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 7,040 \$ 2,520 \$										\$	4,800
S.9 OHSW Assembly - Angle / DE 12 Assembly \$ 250 \$ 3,000 \$ 150 \$ 1,800 \$ 400 \$ 5.10 OPGW Splice Boxes 2 Set \$ 1,746 \$ 3,492 \$ 2,274 \$ 4,548 \$ 4,02 \$ 5.11 OPGW Splice & Test 2 EA \$ 2,520 \$ 5,040 \$ 2,520 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040											6,300
5.10 OPGW Splice Boxes 2 Set \$ 1,746 \$ 3,492 \$ 2,274 \$ 4,548 \$ 4,02 5.11 OPGW Splice & Test 2 EA \$ 2,520 \$ 5,040 \$ 2,520 \$ 5,040 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04 \$ 5,04										\$	4,800
5.11 OPGW Splice & Test 2 EA \$ 2,520 \$ 5,040 \$ 2,520 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 5,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$ 6,040 \$										\$	8,040
5.13 Vibration Dampers - Conductor 72 EA \$ 35 \$ 2,520 \$ 7 5.14 Shieldwire / OPGW Dampers, Misc. Fittings 25 EA \$ 27 \$ 675 \$ 35 \$ 875 \$ 6 5.15 Guys, Anchors, and Accessories - EA \$ 720 \$ - \$ 885 \$ - \$ 1,60 5.16 Misc. materials (Signs and Markers) 2.1 Mile \$ 770 \$ 1,617 \$ 1,006 \$ 2,113 \$ 1,77 5.18 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -			2						\$ 5,040	\$	10,080
5.14 Shieldwire / OPGW Dampers, Misc. Fittings 25 EA \$ 27 \$ 675 \$ 35 \$ 875 \$ 6 5.15 Guys, Anchors, and Accessories - EA \$ 720 \$ - \$ 885 \$ - \$ 1,60 5.16 Misc. materials (Signs and Markers) 2.1 Mile \$ 770 \$ 1,617 \$ 1,006 \$ 2,113 \$ 1,77 5.18 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -											-
5.15 Guys, Anchors, and Accessories - EA \$ 720 \$ - \$ 885 \$ - \$ 1,60 \$ 5.16 Misc. materials (Signs and Markers) 2.1 Mile \$ 770 \$ 1,617 \$ 1,006 \$ 2,113 \$ 1,77 \$ 5.17 \$ 5.18 \$ 5.19	5.13 V	ibration Dampers - Conductor	72	EA				\$ 2,520	\$ 70	\$	5,040
5.16 Misc. materials (Signs and Markers) 2.1 Mile \$ 770 \$ 1,617 \$ 1,006 \$ 2,113 \$ 1,777 5.17 5.18 5.19 5.19 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10	5.14 S	hieldwire / OPGW Dampers, Misc. Fittings	25	EA	\$ 27	\$ 675	\$ 35	\$ 875	\$ 62	\$	1,550
5.17 5.18 5.19					· ·		·				-
5.18 5.19		Misc. materials (Signs and Markers)	2.1	Mile	\$ 770	\$ 1,617	\$ 1,006	\$ 2,113	\$ 1,776	\$	3,730
5.19											
										-	
	5.19										
TOTAL - INSULATORS, FITTINGS, HARDWARE: \$ 107,544 \$ 56,496		TORS. FITTINGS. HARDWARE:				\$ 107.544		\$ 56.496		\$	164,040

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
C. Blue S	Stores Junction to Blue Stores Substation				\$ 1,025,639		\$ 3,720,722		\$	4,746,361
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$	47,464
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 296,004	\$ 296,004	\$ 296,004	\$	296,004
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$	47,464
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$	47,464
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 237,318	\$ 237,318	\$ 237,318	\$	237,318
6.6	LIDAR	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$	14,239
6.7	Geotech	2	Location	\$ -	\$ -	\$ 3,500	\$ 7,000	\$ 3,500	\$	7,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 33,225	\$ 33,225	\$ 33,225	\$	33,225
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$	20,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -		\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$	14,239
6.13	Real Estate Costs (New ROW)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 153,000	\$ 153,000	\$ 153,000	\$	153,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$ 82,051	\$ 82,051	\$ -	\$ -	\$ 82,051	\$	82,051
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS	,	\$ -	\$ 4,746	\$ 4,746	\$ 4,746	\$	4,746
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 82,051		\$ 922,162		Ś	1,004,213

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C. TL BS Junc.-Blue Stores SS

NextEra T023 (Segment B Alternate) D. Knickerbocker 345kV Substation - Install

Estimate Revision: 5 Total: \$ 19,121,061

NextEra T023 (Segment B	Alternate)		
	Supply	Installation	Total
D. Knickerbocker 345kV Substation - Install			
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ 223,675	\$ 1,936,115	\$ 2,159,790
2. SUBSTATION FOUNDATIONS	\$ 1,572,935	\$ 1,694,150	\$ 3,267,085
3. SUBSTATION STRUCTURES	\$ 727,975	\$ 727,975	\$ 1,455,950
4. MAJOR EQUIPTMENT	\$ 600,000	\$ 240,000	\$ 840,000
5. SMALL EQUIPTMENT / MATERIALS	\$ 1,086,500	\$ 489,500	\$ 1,576,000
6. CONTROL HOUSE / PANELS	\$ 1,837,125	\$ 1,227,625	\$ 3,064,750
7. MISC ITEMS	\$ 1,061,528	\$ 1,684,810	\$ 2,746,338
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ 568,779	\$ 3,442,369	\$ 4,011,148
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ 7,678,517	\$ 11,442,544	\$ 19,121,061
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ 7,678,517	\$ 11,442,544	\$ 19,121,061

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Knick	erbocker 345kV Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	3.875	ACRES	\$.	-	\$ -	\$ 355,000	\$ 1,375,625	\$ 355,000	\$ 1,375,625
1.2	Station stone within substation fence.	1,650	CY	\$	27	\$ 44,550	\$ 75	\$ 123,750	\$ 102	\$ 168,300
1.3	Substation Fence	1,660	LF	\$ 1	100	\$ 166,000	\$ 100	\$ 166,000	\$ 200	\$ 332,000
1.4										
1.5										
1.6	Permanent Access Road - 20'-Wide	275	LF	\$	35	\$ 9,625	\$ 285	\$ 78,375	\$ 320	\$ 88,000
1.7	Pavement	3,373	SY	\$.	-	\$ -	\$ 55	\$ 185,515	\$ 55	\$ 185,515
1.8	Gates	1	EA	\$ 2,0	000	\$ 2,000	\$ 2,500	\$ 2,500	\$ 4,500	\$ 4,500
1.9	Culverts / Misc. Access	2	EA	\$ 7	750	\$ 1,500	\$ 1,250	\$ 2,500	\$ 2,000	\$ 4,000
1.10	Concrete Washout Station	1	EA	\$ -	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	PREP/ GRADING/ FENCING / CIVIL					\$ 223,675		\$ 1,936,115		\$ 2,159,790
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	3	EA	\$ 14,9	940	\$ 44,820	\$ 16,000	\$ 48,000	\$ 30,940	\$ 92,820
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,0)25	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	16	EA	\$ 26,1	145	\$ 418,320	\$ 28,000	\$ 448,000	\$ 54,145	\$ 866,320
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,1	145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	72	EA	\$ 4,4	182	\$ 322,704	\$ 4,800	\$ 345,600	\$ 9,282	\$ 668,304
2.1f	Station Service Transformer Stand Foundation	4	EA	\$ 4,4	182	\$ 17,928	\$ 4,800	\$ 19,200	\$ 9,282	\$ 37,128
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	72	EA	\$ 4,4	182	\$ 322,704	\$ 4,800	\$ 345,600	\$ 9,282	\$ 668,304
2.1j	Instrument Transformer Stand Foundations	27	EA	\$ 4,4	182	\$ 121,014	\$ 4,800	\$ 129,600	\$ 9,282	\$ 250,614
2.1k	Arrester Stand Foundations	9	EA	\$ 4,4	182	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1m	Wave Trap Stand Foundations	3	EA	\$ 4,4	182	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1n	Reactor Foundations	0	EA	\$ 7,4	170	\$ -	\$ 8,000	\$ -	\$ 15,470	\$ -
2.1p										

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2.1q 2.2		Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2									
	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
	115kV								
	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$ 16,434	\$ 131,472		\$ 140,800	\$ 34,034	\$ 272,272
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
	Instrument Transformer Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3k	Arrester Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	,								•
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 44,260	\$ 44,260	\$ 47,400	\$ 47,400	\$ 91,660	\$ 91,660
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
2.5c	Station Service Distribution Line - 3ph.	1	LS	\$ -	\$ -	\$ 9,750	\$ 9,750	\$ 9,750	\$ 9,750
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	5	EA	\$ 5,229	\$ 26,145	\$ 5,600	\$ 28,000	\$ 10,829	\$ 54,145
2.6b				\$ -	\$ -	\$ -	\$ -		\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CURCE	ATION FOLINDATIONS				\$ 1,572,935		\$ 1.694.150		\$ 3,267,085
	ATION FOUNDATIONS I STRUCTURES				1,572,935		\$ 1,694,150		\$ 3,267,085
	345kV								
	Substation A-Frame Structures - Stand alone	4	EA	\$ 37,000	\$ 148,000	\$ 37,000	\$ 148,000	\$ 74,000	\$ 296,000

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$	37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$	-
3.1c	Switch Stands	12	EA	\$	14,800	\$ 177,600	\$ 14,800	\$ 177,600	\$ 29,600	\$	355,200
3.1d	Station Service Transformer Stand	1	EA	\$	14,800	\$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$	29,600
3.1e	Bus Support 3ph	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
3.1f	Bus Support 1 Ph	72	EA	\$	3,700	\$ 266,400	\$ 3,700	\$ 266,400	\$ 7,400	\$	532,800
3.1g	Instrument Transformer Stand	27	EA	\$	1,850	\$ 49,950	\$ 1,850	\$ 49,950	\$ 3,700	\$	99,900
3.1h	Arrester Stand	9	EA	\$	1,850	\$ 16,650	\$ 1,850	\$ 16,650	\$ 3,700	\$	33,300
3.1j	Wave Trap Stand	3	EA	\$	7,400	\$ 22,200	\$ 7,400	\$ 22,200	\$ 14,800	\$	44,400
3.1k	Lightning Mast - 70'	5	EA	\$	6,475	\$ 32,375	\$ 6,475	\$ 32,375	\$ 12,950	\$	64,750
3.2	230kV										
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$	33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$	33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2c	Switch Stands	0	EA	\$	12,025	\$ -	\$ 12,025	\$ -	\$ 24,050	\$	-
3.2d	Station Service Transformer Stand	0	EA	\$	12,025			\$ -	\$ 24,050	\$	-
3.2e	Bus Support 3ph	0	EA	\$	-		\$ -	\$ -	\$ -	\$	
3.2f	Bus Support 1 Ph	0	EA	\$	2,775	\$ -	\$ 2,775	\$ -	\$ 5,550	Ś	-
3.2g	Instrument Transformer Stand	0	EA	\$	1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	Ś	-
3.2h	Arrester Stand	0	EA	\$	1,295	\$ -	\$ 1,295		\$ 2,590		
3.2j	Wave Trap Stand	0	EA	\$	5,550	\$ -	\$ 5,550	\$ -	\$ 11,100		-
3.2k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	-	_
J.L.K	inistration structures		271	1	0,	Ÿ	φ 0,173	Ÿ	ψ 12,550	Ť	
3.3	115kV										
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$	18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	ć	
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$	18,500			\$ -	\$ 37,000		
3.3c	Switch Stands	0	EA	Ś	7,955	\$ -	*	\$ -	\$ 15,910	-	-
3.3d	Fuse Stand	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	Ś	
3.3e	Bus Support 3ph	0	EA	\$	3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	-	
3.3f	Bus Support 1 Ph	0	EA	\$	1,850	\$ -	\$ 1,850	·	\$ 3,700	-	
3.3g	Instrument Transformer Stand	0	EA	\$	740			\$ -	\$ 1,480		-
3.3h	Arrester Stand	0	EA	\$	740	\$ -	*	\$ -	\$ 1,480	-	-
3.3j	Wave Trap Stand	0	EA	\$	3,700	\$ -	\$ 3,700	\$ -	\$ 7,400	Ś	
3.3k	Misc. Structures	0	EA	Ś	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	<u> </u>	
3.31	INISC. Structures	0	LA	٦	0,473	-	\$ 0,473	· -	\$ 12,930	,	
TOTAL CURC	FATION CTRUCTURES					A 707.075		A 707.075			4 455 050
	TATION STRUCTURES					\$ 727,975		\$ 727,975		\$	1,455,950
4. MAJOR EQU	345kV										
4.1a	Circuit Breakers	3	EA	Ś	200,000	\$ 600,000	\$ 80,000	\$ 240,000	\$ 280,000	\$	840,000
				+		-		,		-	840,000
4.1b	Capacitor Banks with Reactors	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	,	
4.1c											
4.1d											
4.1e											
4.2	230kV										
4.2a	Circuit Breakers	0	EA	\$	115,000		\$ 80,000		\$ 195,000		•
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	Ş	•
4.3	115kV										
4.3a	Circuit Breakers	0	EA	\$	52,000			\$ -	\$ 112,000	 	-
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$	-
TOTAL - MAJO	R EQUIPTMENT					\$ 600,000		\$ 240,000		\$	840,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5. SMALL EQU	JIPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	3	EA	\$ 40,000	\$ 120,000	\$ 15,000	\$ 45,000	\$ 55,000	\$ 165,000
5.1b	Disconnect Switches - 3ph w/ manual operator	6	EA	\$ 35,000	\$ 210,000	\$ 17,500	\$ 105,000	\$ 52,500	\$ 315,000
5.1c	VT'S	9	EA	\$ 25,000	\$ 225,000	\$ 12,000	\$ 108,000	\$ 37,000	\$ 333,000
5.1d	CT'S	9	EA	\$ 13,000	\$ 117,000	\$ 8,000	\$ 72,000	\$ 21,000	\$ 189,000
5.1e	CCVT'S	9	EA	\$ 13,000	\$ 117,000	\$ 8,000	\$ 72,000	\$ 21,000	\$ 189,000
5.1f	Arresters	9	EA	\$ 6,500	\$ 58,500	\$ 1,500	\$ 13,500	\$ 8,000	\$ 72,000
5.1g	Wave Traps	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$ 250,000
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV				_		_		
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ 33,000	\$ -	\$ 15,000	\$ -	\$ 48,000	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
5.3c	VT'S	0	EA	\$ 13,000 \$ 13,000	\$ -		\$ - \$ -	\$ 21,000 \$ 21,000	
5.3d	CCT'S CCVT'S	0	EA EA	\$ 13,000 \$ 8,000	\$ -	\$ 8,000 \$ 8,000		\$ 21,000 \$ 16,000	•
5.3e 5.3f	Arresters	0	EA	\$ 3,420	\$ - \$ -	\$ 6,000	\$ - \$ -	\$ 16,000	\$ - \$ -
5.3g	Wave Traps	0	EA	\$ 10,000	\$ -	\$ 8,000	\$ -	\$ 18,000	\$ -
5.3h	Station Service Transformers	0	EA	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ 1,500	\$ -	\$ 1,500	\$ -	\$ 3,000	•
3.3,	1.000		271	2,300	·	ψ 1,500	<u> </u>	ŷ 3,000	*
TOTAL - SMAI	LL EQUIPTMENT / MATERIALS				\$ 1,086,500		\$ 489,500		\$ 1,576,000
6. CONTROL F	HOUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ 409,500	\$ 409,500	\$ 95,000	\$ 95,000	\$ 504,500	\$ 504,500
6.2	Protection and Telecom Equipment Panels	17	EA	\$ 35,000	\$ 595,000	\$ 10,000	\$ 170,000	\$ 45,000	\$ 765,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,000
6.4	Control Cables	1	LS	\$ 317,625	\$ 317,625	\$ 317,625	\$ 317,625	\$ 635,250	\$ 635,250
6.5	SCADA and Communications	1	EA	\$ 50,000	\$ 50,000	\$ 100,000	\$ 100,000	\$ 150,000	\$ 150,000
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500		
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500		\$ 15,000	\$ 15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
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Septime Reliance in Septime 1,500	Item	Item Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	1	TOTAL
1,72 Rigid Bass Hamps Binocleans	7. MISC ITEMS											
2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	7.1	Conduit & Cable Trench System	1,050	LF	\$	185.00	\$ 194,250	\$ 170.00	\$ 178,500	\$ 355	\$	372,750
Part State Part State Part State Part State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State	7.2	Rigid Bus, Fittings & Insulators	1,900	LF	\$	125.07	\$ 237,633	\$ 237.10	\$ 450,490	\$ 362	\$	688,123
Norm to minutations - SAMP 10	7.3	Strain Bus, Connectors & Insulators	1,000	LF	\$	39.30	\$ 39,300	\$ 53.35	\$ 53,350	\$ 93	\$	92,650
Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some Some	7.4	Grounding System	16,500	LF	\$	6.93	\$ 114,345	\$ 32.58	\$ 537,570	\$ 40	\$	651,915
7.7					_		\$ 76,000					115,900
7.8							\$ -					
7.9 SVY Service		Strain Bus Insulators - 115kV	0				7				\$	
7.10 Control Conduit from ment to Pageporer		Low Voltage AC Station Service			<u> </u>							125,000
7.71 Mic. Material, Jabone and Ricky Ground)	7.9	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.21		Control Conduits from Trench to Equipment	1		_	125,000		\$ 125,000				250,000
7.34	7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.15	7.12											
7.15												
7.17	7.14											
7.17												
7.18	7.16											
7.20	7.17											
7.21												
7.21	7.19											
7.22												
7.23 7.24 7.25 7.26 7.27 7.27 7.27 7.28 7.28 7.28 7.29 7.29 7.29 7.29 7.29 7.29 7.29 7.29	7.21											
7.24	7.22											
TOTAL MISC (TEMS)												
D. Knickerbocker 345kV Substation - Install S. MOR/DEMOS, ENGINEERING, FERMITING, Tag, PM & INDIRECTS: S. MOR/DEMOS, ENGINEERING, FERMITING, Tag, PM & INDIRECTS: S. MOR/DEMOS, ENGINEERING, Tag, PM & INDIRECTS: S. MOR/DEMOS, ENGINEERING, Tag, PM & INDIRECTS: S. MOR/DEMOS, ENGINEERING, Tag, PM & INDIRECTS: S. MOR/DEMOS, ENGINEERING, Tag, PM & INDIRECTS: S. MOR/DEMOS, ENGINEERING, PERMITING, Tag, PM & INDIRECTS: S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEMOS S. MOR/DEM	7.24											
D. Knickerbocker 345kV Substation - Install S. MOB/DEMOS, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: S. MOB S. MOBINEERING S. MOB S. MOBINEERING S. MOB S. MOBINEERING S. MOB S. MOBINEERING S. MOB S. MOBINEERING S. MOB S. MOB S. MOBINEERING S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB S. MOB												
S. MOR/DEWOS, ENGINEERING, PERMITTING, T&C, PM& INDIRECTS:												
Second Contractor Mobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Demobilization Dem	D. Knick	erbocker 345kV Substation - Install					\$ 7,109,738		\$ 8,000,175		\$	15,109,913
8.1 Mob / Demob	8. MOB/DEMO											
Project Management, Material Handling & Amerities												
R.2 Project Management & Staffing (Includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	8.1		1.0	LS	\$	-	\$ -	\$ 151,099	\$ 151,099	\$ 151,099	\$	151,099
8.2 and Cost Manager, SHEQ Staff, and Admin Staff) LS S 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322 942,322		Project Management, Material Handling & Amenities										
8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 151,099 \$ 1,208,793 \$ 1,208,793 \$ 1,208,793 \$ 1,208,793 \$ 1,208,793 \$	8.2		1	LS				\$ 942,322	\$ 942,322	\$ 942,322	\$	942,322
Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering	8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 151,099	\$ 151,099	\$ 151,099	\$	151,099
Engineering Cosign Engineering Cosign Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Engineering Costgn Enginee	8.4		1	LS	\$	-	\$ -	\$ 151,099	\$ 151,099	\$ 151,099	\$	151,099
8.5 Design Engineering 1 LS \$ - \$ 1,208,793 \$ 1,208,793 \$ 1,208,793 8.6 LiDAR - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$												
8.7 Geotech 4 EA 5 - 5 3,500 \$ 14,000 \$ 3,500 \$ 14,000 8.8 Surveying/Staking 1 Site \$ - \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,769 \$ 105,7	8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 1,208,793	\$ 1,208,793	\$ 1,208,793	\$	1,208,793
8.8 Surveying/Staking Surveying/Staking Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site	8.6		-	LS	\$	-	\$ -	\$ -				
8.8 Surveying/Staking Surveying/Staking Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site	8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$	14,000
8.9 Testing & Commissioning of T-Line and Equipment 1 LS \$ - \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ <th< td=""><td></td><td></td><td>1</td><td></td><td></td><td>-</td><td>\$ -</td><td></td><td></td><td></td><td></td><td>105,769</td></th<>			1			-	\$ -					105,769
8.9 Testing & Commissioning of T-Line and Equipment 1 LS \$ - \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377,748 \$ 377		Testing & Commissioning										
Permitting and Additional Costs Environmental Licensing & Permitting Costs L L S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S	8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 377,748	\$ 377,748	\$ 377,748	\$	377,748
8.11 Environmental Mitigation LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 45,330 \$ 45,330 \$ 45,330												
8.11 Environmental Mitigation	8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	8.11		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 45,330	\$ 45,330	\$ 45,330	\$	45,330
	8.13		-	LS								

Item	Item Description	Estimated Quantity	Unit of Measure	Materi	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	568,779	\$ 568,779	\$ -	\$ -	\$ 568,779	\$ 568,779
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 15,110	\$ 15,110	\$ 15,110	\$ 15,110
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 568,779		\$ 3,442,369		\$ 4,011,148

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NextEra T023 (Segment B Alternate) H. North Churchtown Substation - Install

Total: \$ 16,285,817

NextEra T023 (Seg	gment B Altern	ate)			
		Supply	Installation		Total
H. North Churchtown Substation - Install					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	919,243	\$ 2,855,295	\$	3,774,539
2. SUBSTATION FOUNDATIONS	\$	773,458	\$ 834,700	\$	1,608,158
3. SUBSTATION STRUCTURES	\$	208,000	\$ 338,365	\$	676,730
4. MAJOR EQUIPTMENT	\$	208,000	\$ 240,000	\$	448,000
5. SMALL EQUIPTMENT / MATERIALS	\$	954,540	\$ 637,800	\$	1,592,340
6. CONTROL HOUSE / PANELS	\$	1,962,850	\$ 1,310,350	\$	3,273,200
7. MISC ITEMS	\$	731,113	\$ 935,704	\$	1,666,817
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	471,006	\$ 2,775,028	\$	3,246,034
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	6,228,210	\$ 9,927,242	\$	16,285,817
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	Ś	6,228,210	\$ 9,927,242	Ś	16,285,817

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Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
H. North	Churchtown Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	2.125	ACRES	\$	-	\$ -	\$ 660,000	\$ 1,402,500	\$ 660,000	\$ 1,402,500
1.2	Station stone within substation fence.	600	CY	\$	27	\$ 16,200	\$ 75	\$ 45,000	\$ 102	\$ 61,200
1.3	Substation Fence	970	LF	\$	100	\$ 97,000	\$ 100	\$ 97,000	\$ 200	\$ 194,000
1.4	Permanent Access Road - 20'-Wide	650	LF	\$	35	\$ 22,750	\$ 285	\$ 185,250	\$ 320	\$ 208,000
1.5	Retaining Wall (1050' x Avg. of 7.15')	1	LS	\$	318,371	\$ 318,371	\$ 492,245	\$ 492,245	\$ 810,616	\$ 810,616
1.6	Compacted Fill (Sand)	27,143	CY	\$	17	\$ 461,423	\$ 20	\$ 542,850	\$ 37	\$ 1,004,273
1.7										
1.8	Pavement	1,520	SY	\$	-	\$ -	\$ 55	\$ 83,600	\$ 55	\$ 83,600
1.9	Gates	1	EA	\$	2,000	\$ 2,000	\$ 2,500	\$ 2,500	\$ 4,500	\$ 4,500
1.10	Culverts / Misc. Access	2	EA	\$	750	\$ 1,500	\$ 1,250	\$ 2,500	\$ 2,000	\$ 4,000
1.11	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 919,243		\$ 2,855,295		\$ 3,774,539
	N FOUNDATIONS							, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
2.1	345kV									
2.1a	Circuit Breaker Foundations	0	EA	\$	14,940	\$ -	\$ 16,000	\$ -	\$ 30,940	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1n	Reactor Foundations	0	EA	\$	7,470		\$ 8,000		\$ 15,470	
2.1p							,		,	
·				\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820		\$ 48,000		\$ 92,820	
	· ·	- 1					,		, , , , , , , , , , , , , , , , , , , ,	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000		\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2j 2.2k	Instrument Transformer Stand Foundations	0	EA EA	\$ 3,735 \$ 3,735	\$ - \$ -	\$ 4,000 \$ 4,000	\$ - \$ -	\$ 7,735 \$ 7,735	
2.2K 2.2m	Arrester Stand Foundations Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2m	Misc. Structure Foundations	0	EA	\$ 3,733	\$ -	\$ 4,000	\$ -	,	\$ -
2.2p	Wisc. Structure Foundations		EA	,	<u> </u>	,	<u> </u>	J.	*
2.3	115kV								
2.3a	Circuit Breaker Foundations	4	EA	\$ 5,229	\$ 20,916	\$ 5,600	\$ 22,400	\$ 10,829	\$ 43,316
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	24	EA	\$ 16,434	\$ 394,416		\$ 422,400	\$ 34,034	
2.3e	Switch Stand Foundations	24	EA	\$ 2,988	\$ 71,712			\$ 6,188	
2.3f	Fuse Stand Foundations	2	EA	\$ 2,988	\$ 5,976		\$ 6,400	\$ 6,188	
2.3g 2.3h	Bus Support 1 Ph Foundations	8	EA EA	\$ 2,988 \$ 2,988	\$ 23,904 \$ 35,856		\$ 25,600 \$ 38,400	\$ 6,188 \$ 6,188	\$ 49,504 \$ 74,256
2.3n 2.3j	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	36	EA	\$ 2,988	\$ 35,856		\$ 38,400	\$ 6,188	
2.3k	Arrester Stand Foundations	12	EA	\$ 2,988	\$ 35,856		\$ 38,400	\$ 6,188	\$ 74,256
2.3m	Wave Trap Stand Foundations	8	EA	\$ 2,988	\$ 23,904		\$ 25,600	\$ 6,188	
2.3n	Station Service Foundations	1	EA	\$ 3,735	\$ 3,735		\$ 4,000	\$ 7,735	
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	- (-);								
2.4	Transformer Foundations		F.A.	Ć 07.110	ć	ć 404.000	ć	Ć 201.110	A
2.4a 2.4b	345-230kV Transformer Foundation w/ Oil Containment 345-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ 97,110 \$ 74,700	\$ - \$ -	\$ 104,000 \$ 80,000	\$ - \$ -	\$ 201,110 \$ 154,700	\$ - \$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 134,700	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	·	-		,	,	7	Ť	,	*
2.5	Control House Foundations / Pad								4
2.5a	Control House / Pad	1	EA EA	\$ 33,615	\$ 33,615		\$ 36,000 \$ 17,000	\$ 69,615	
2.5b 2.5c	Generator Foundation Station Service Distribution Line - 1ph.	1	LS	\$ 16,000 \$ -	\$ 16,000 \$ -	\$ 17,000 \$ 6,500	\$ 17,000 \$ 6,500	\$ 33,000 \$ 6,500	\$ 33,000 \$ 6,500
2.6	Lightning Mast Foundations	1	L3	, -	÷ -	\$ 0,300	\$ 0,300	\$ 0,300	\$ 0,500
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b	70 Lightning Medicion	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	TATION FOUNDATIONS				\$ 773,458		\$ 834,700		\$ 1,608,158
3. SUBSTATIO	N STRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -		\$ -	\$ 74,000	
3.1c	Switch Stands	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -		\$ -	\$ 29,600	
3.1e 3.1f	Bus Support 1 Ph	0	EA EA	\$ -	\$ - \$ -	\$ - \$ 3,700	\$ - \$ -	\$ - \$ 7,400	\$ - \$ -
3.1f 3.1g	Bus Support 1 Ph Instrument Transformer Stand	0	EA EA	\$ 3,700	\$ -	\$ 3,700	\$ - \$ -	\$ 7,400	
3.1h	Arrester Stand	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	
3.1j	Wave Trap Stand	0	EA	\$ 7,400	•		\$ -	\$ 14,800	
3.1k	Lightning Masts - 70'	0	EA	\$ 6,475		\$ 6,475		\$ 12,950	
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300		\$ 33,300		\$ 66,600	
3.2c	Switch Stands	0	EA	\$ 12,025	\$ -			\$ 24,050	
3.2d	Station Service Transformer Stand	0	EA	\$ 12,025	\$ -	\$ 12,025	\$ -	\$ 24,050	
3.2e	Bus Support 3ph	0	EA	\$ -			\$ -	\$ -	
3.2f	Bus Support 1 Ph	0	EA		\$ -	\$ 2,775		\$ 5,550	
3.2g	Instrument Transformer Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$ -

Item	item Description	Estimated Quantity	Unit of Measure	Material Sup		Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2h	Arrester Stand	0	EA	\$	1,295	\$ -	\$ 1,295	\$ -		\$ -
3.2j	Wave Trap Stand	0	EA	\$	5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
3.2k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV									
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$	18,500		\$ 18,500	\$ -		\$ -
3.3b	Substation A-Frame Structures - Shared Column	8	EA	\$	18,500	\$ 148,000	\$ 18,500	\$ 148,000	\$ 37,000	\$ 296,000
3.3c	Switch Stands	12	EA	\$	7,955		\$ 7,955			\$ 190,920
3.3d	Fuse Stand	1	EA	\$	7,955		\$ 7,955			\$ 15,910
3.3e	Bus Support 3ph	4	EA	\$	3,330	-/	\$ 3,330	\$ 13,320	\$ 6,660	\$ 26,640
3.3f	Bus Support 1 Ph	12	EA	\$	1,850		\$ 1,850			\$ 44,400
3.3g	Instrument Transformer Stand	36	EA	\$	740		\$ 740			\$ 53,280
3.3h	Arrester Stand	12	EA	\$	740	. , , ,	\$ 740			\$ 17,760
3.3j	Wave Trap Stand	4	EA	\$	3,700		\$ 3,700	. , ,	\$ 7,400	\$ 29,600
3.3k	Lightning Mast	0	EA	\$	6,475		\$ 6,475			\$ -
3.31	Station Service Transformer Support Stand	1	EA	\$	1,110		\$ 1,110		\$ 2,220	
	TATION STRUCTURES					\$ 338,365		\$ 338,365		\$ 676,730
4. MAJOR EQU										
4.1	345kV		F.*	ć	300,000	ć	ć 00.000	ć	ć 200.000	*
4.1a 4.1b	Circuit Breakers	0	EA EA	\$			\$ 80,000 \$ 80,000		\$ 380,000 \$ 80,000	•
	Capacitor Banks	0								•
4.1c 4.1d	345 kV - 230 kV Auto Transformer	0	EA EA	\$			\$ 750,000 \$ 750,000		\$ 750,000	•
	345 kV - 115 kV Auto Transformer 230kV	U	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	<u> </u>
4.2 4.2a	Circuit Breakers	0	EA	\$	250,000	\$ -	\$ 80,000	\$ -	\$ 330,000	\$ -
4.2a 4.2b	Capacitor Banks	0	EA	Ś			\$ 80,000	\$ - \$ -	\$ 80,000	\$ -
4.20	Capacitor Banks	U	EA	\$		ş -	\$ 80,000	, -	\$ 80,000	, -
4.3	115kV									
4.3a	Circuit Breakers	4	EA	\$	52,000	\$ 208,000	\$ 60,000	\$ 240,000	\$ 112,000	\$ 448,000
4.3b	Capacitor Banks	0	EA	\$	-		\$ 60,000		\$ 60,000	
	Capacitor Burno			Ť		Ÿ	• 00,000	<u> </u>	ÿ 00,000	*
TOTAL - MAJO	DR EQUIPTMENT					\$ 208,000		\$ 240,000		\$ 448,000
5. SMALL EQU	IIPTMENT / MATERIALS									<u> </u>
5.1	345kV									
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$	40,000	\$ -	\$ 15,000	\$ -	\$ 55,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	\$ -
5.1c	VT'S	0	EA	\$	25,000	\$ -	\$ 12,000	\$ -	\$ 37,000	\$ -
5.1d	CT'S	0	EA	\$	13,000	\$ -	\$ 8,000			\$ -
5.1e	CCVT'S	0	EA				7 -,	\$ -	\$ 21,000	
5.1f	Arresters			\$	13,000	\$ -	\$ 8,000		\$ 21,000 \$ 21,000	\$ -
5.1g		0	EA	\$	6,500	\$ -	\$ 8,000 \$ 1,500	\$ -	\$ 21,000 \$ 8,000	\$ -
	Wave Traps	0	EA EA	\$	6,500 13,000	\$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ -
5.1h	Wave Traps Station Service Transformers		EA	\$	6,500	\$ - \$ -	\$ 8,000 \$ 1,500	\$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ -
		0	EA EA	\$	6,500 13,000	\$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ -
5.1h 5.1j	Station Service Transformers	0	EA EA	\$	6,500 13,000	\$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ -
5.1h 5.1j 5.2	Station Service Transformers 230kV	0	EA EA EA	\$ \$ \$	6,500 13,000 200,000	\$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000	\$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000	\$ - \$ - \$ -
5.1h 5.1j 5.2 5.2a	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator	0	EA EA EA	\$ \$ \$	6,500 13,000 200,000 35,000	\$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000	\$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000	\$ - \$ - \$ - \$ -
5.1h 5.1j 5.2 5.2a 5.2b	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0 0 0	EA EA EA EA EA	\$ \$ \$ \$ \$ \$ \$	6,500 13,000 200,000 35,000 30,000	\$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500	\$ - \$ - \$ - \$ - \$ -
5.1h 5.1j 5.2 5.2a 5.2b 5.2c	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0 0 0 0 0	EA EA EA EA EA	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	35,000 30,000 31,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 17,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ \$ 50,000 \$ 47,500 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2c	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S	0 0 0 0 0 0	EA EA EA EA EA EA EA EA	\$ \$ \$ \$ \$ \$ \$	35,000 30,000 35,000 30,000 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 17,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2d 5.2c	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ \$ \$ \$ \$ \$ \$ \$	35,000 30,000 31,000 30,000 13,000 10,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2c 5.2d 5.2e 5.2f	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	6,500 13,000 200,000 35,000 30,000 13,000 13,000 10,000 5,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 5,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2c 5.2c 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2h 5.3 5.3a 5.3a 5.3a 5.3c	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	35,000 35,000 30,000 13,000 13,000 13,000 13,000 33,000 33,000 28,000 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ - \$ 15,000 \$ 15,000 \$ 8,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 17,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 5,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 11,000 \$ 11,000 \$ - \$ 1,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 2	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2c 5.2c 5.2c 5.2c 5.2c 5.2f 5.2g 5.2h 5.2j 5.3a 5.3a 5.3a 5.3a 5.3c 5.3c	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CC'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCYT'S Arresters Wave Traps Station Service Transformers	0 0 0 0 0 0 0 0 0 0 0 0 4 4 8 12 12	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	6,500 13,000 200,000 35,000 13,000 13,000 13,000 13,000 - - 33,000 28,000 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 250,000 \$ 47,500 \$ 21,000 \$ 11,000 \$ 11,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1h 5.1j 5.2 5.2a 5.2a 5.2b 5.2c 5.2c 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2h 5.3 5.3a 5.3a 5.3a 5.3c	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	35,000 35,000 30,000 13,000 13,000 13,000 13,000 33,000 33,000 28,000 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 17,500 \$ 8,000 \$ 17,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 250,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 11,000 \$ 11,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 3 21,000 \$ 3 3,000 \$ 3 45,500 \$ 21,000 \$ 3 45,500 \$ 21,000 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 45,500 \$ 3 5,500 \$ 3 5,500 \$ 3 5,500 \$ 3 5,500 \$ 3 5,500 \$ 3 5,500 \$ 3 5,500 \$ 3 5,500 \$ 3 5,500 \$ 3	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

5.01		Estimated Quantity	Unit of Measure	Mate	ial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
5.3h Stati	ation Service Transformers	1	EA	\$	75,000	\$ 75,000	\$ 35,000	\$ 35,000	\$ 110,000	\$	110,000
5.3j Fuse	ses	3	EA	\$	7,500	\$ 22,500	\$ 3,600	\$ 10,800	\$ 11,100	\$	33,300
						d 054.540		d 527.000			4 502 240
	QUIPTMENT / MATERIALS SE / PANELS / GENERATOR					\$ 954,540		\$ 637,800		\$	1,592,340
	ONTROL HOUSE	1	EA	\$	292,500	\$ 292,500	\$ 85,000	\$ 85,000	\$ 377,500	<u> </u>	377,500
	otection and Telecom Equipment Panels	23	EA	\$	35,000		\$ 10,000			\$	1,035,000
6.3 125	5VDC Batteries	2	EA	Ś	75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$	200,000
	ntrol Cables	1	LS	\$	350,350				\$ 700,700		700,700
6.5 SCAI	ADA and Communications	1	EA	\$	50,000	\$ 50,000	\$ 100,000	\$ 100,000	\$ 150,000	\$	150,000
	w Voltage AC Distribution	2	EA	\$	50,000				\$ 150,000		300,000
	C Distribution System	2	EA	\$	50,000				\$ 150,000	_	300,000
	curity	1	EA	\$	7,500				\$ 15,000	\$	15,000
	e Alarm	1	EA	\$		\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
6.10 Gen	enerator	1	EA	\$	100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
TOTAL CONTROL	HOUSE / DANIELS / SENIEDATOR					4 4 052 050		4 4 240 250			2 272 222
7. MISC ITEMS	. HOUSE / PANELS / GENERATOR					\$ 1,962,850		\$ 1,310,350		\$	3,273,200
	nduit & Cable Trench System	600.0	LF	Ś	185.00	\$ 111,000	\$ 170.00	\$ 102,000	\$ 355	\$	213,000
				+ -							
	gid Bus, Fittings & Insulators	700.0	LF	\$	125.07	· ,	\$ 237.10		\$ 362	\$	253,519
7.3 Strai	rain Bus, Connectors & Insulators	1,000.0	LF	\$	39.30	\$ 39,300	\$ 53.35	\$ 53,350	\$ 93	\$	92,650
7.4 Grou	ounding System	4,800.0	LF	\$	6.93	\$ 33,264	\$ 32.58	\$ 156,384	\$ 40	\$	189,648
7.5 Strai	rain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$	-
7.6 Strai	rain Bus Insulators - 230kV	0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$	-
7.7 Strai	rain Bus Insulators - 115kV	60	EA	\$	1,000		\$ 550	\$ 33,000	\$ 1,550	\$	93,000
	w Voltage AC Station Service	1	LS	\$	50,000				\$ 125,000		125,000
	VT Service	1	LS	\$	45,000			\$ 45,000	\$ 90,000	\$	90,000
	ntrol Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000		\$ 125,000	\$ 250,000	\$	250,000
	isc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12 7.13											
7.13											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20											
7.21											
7.22										<u> </u>	
7.23				-							
7.24											
7.25 TOTAL - MISC ITEM	MS					\$ 731,113		\$ 935,704		\$	1,666,817
	hurchtown Substation - Install					\$ 5,887,569		\$ 7,152,214		\$	13,039,784
8. MOB/DEMOR F	ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	ntractor Mobilization / Demobilization										
	ob / Demob	1.0	LS	\$	-	\$ -	\$ 130,398	\$ 130,398	\$ 130,398	\$	130,398
	oject Management, Material Handling & Amenities										
	oject Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler d Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 813,220	\$ 813,220	\$ 813,220	\$	813,220
8.3 Utili	ility PM and Project Oversite	1	LS			\$ -	\$ 130,398	\$ 130,398	\$ 130,398	\$	130,398
	e Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 130,398				130,398
	gineering						,	,	,		
			1.0	\$		\$ -	\$ 1,043,183	\$ 1,043,183	ć 1.042.402	ć	1,043,183
8.5 Desi	sign Engineering	1	LS	\$	-		3 1,043,163	3 1,043,163	\$ 1,043,183	٠,>	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.7	Geotech	4	EA	\$ -	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$ 14,000
8.8	Surveying/Staking	1	Site	\$ -	\$ -	\$ 91,278	\$ 91,278	\$ 91,278	\$ 91,278
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 325,995	\$ 325,995	\$ 325,995	\$ 325,995
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 39,119	\$ 39,119	\$ 39,119	\$ 39,119
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$ -	\$ 44,000	\$ 44,000	\$ 44,000	\$ 44,000
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 471,006	\$ 471,006	\$ -	\$ -	\$ 471,006	\$ 471,006
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 13,040	\$ 13,040	\$ 13,040	\$ 13,040
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 471,006		\$ 2,775,028		\$ 3,246,034

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NextEra T023 (Segment B Alternate) Total: \$ 70,639

NextEra T023 (Segment	3 Alternate)			
	Supply		Installation	Total
I. Greenbush Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ 12,000	\$ 12,000
3. SUBSTATION STRUCTURES	\$	-	\$ -	\$ -
4. MAJOR EQUIPTMENT	\$	-	\$ 7,000	\$ 7,000
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 35,000	\$ 35,000
6. CONTROL HOUSE / PANELS	\$	-	\$ 7,200	\$ 7,200
7. MISC ITEMS	\$	-	\$ -	\$ -
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 9,439	\$ 9,439
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	-	\$ 70,639	\$ 70,639
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$		\$ 70,639	\$ 70,639

Descr	iptic	on of	Wo	rk:

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate			TOTAL
I. Green	bush Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS								
2.1	345kV				4			4	4
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 14,200	\$ -	\$ 14,200	
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	· ·	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	,	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ - \$ -	\$ -	\$ - \$ 2,400	\$ - \$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	0	EA EA	1	,	7 -,	7	\$ 2,400 \$ -	
2.1j 2.1k	Arrester Stand Foundations	0	EA EA		· ·	7	i .	T	
2.1K 2.1m	Wave Trap Stand Foundations	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
2.1m 2.1n	Misc. Structure Foundations	0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n 2.1p	Wisc. Structure Foundations	U	EA	3 -	, -	\$ -	3 -	, -	· -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 32,000		\$ 32,000	
2.20	conson be roundations (for be Arraine set stalld dione)				1 4	22,000	7	22,000	7

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -		\$ -	\$ 11,000	\$ -
2.2e	Switch Stand Foundations	0		\$ -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA EA	\$ -	\$ - \$ -	\$ 2,400 \$ 2,400	\$ - \$ -	\$ 2,400 \$ 2.400	
2.2k 2.2m	Arrester Stand Foundations	0		\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400 \$ -	\$ - \$ -
2.2m	Wave Trap Stand Foundations Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	-	-	, -	, -	· -	-
2.3	115kV								
2.3a	Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 1 Ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$ -
2.3h 2.3j	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	0	EA EA	\$ -	\$ - \$ -	\$ - \$ 2,400	\$ - \$ 4,800	\$ - \$ 2,400	\$ - \$ 4,800
2.3k	Arrester Stand Foundations	0		\$ -	\$ -	\$ 2,400	\$ 4,800	\$ 2,400	\$ 4,800
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	Š -	\$ -	\$ -	\$ -
2.07		-		T	7	,	7		•
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b	70 Egitting Hest Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ -		\$ 12,000		\$ 12,000
	N STRUCTURES								
3.1	345kV				<u> </u>	4	^	^	•
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA EA	\$ -	\$ - \$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0		\$ -	'	\$ -	\$ - \$ -	\$ -	\$ -
3.1d 3.1e	Station Service Transformer Stand Bus Support 3ph	0	EA EA	\$ -	\$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.1e 3.1f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	\$ -
3.1g	Instrument Transformer Stand	0		\$ -	\$ -	\$ 2,230	\$ -	\$ 2,250	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0		\$ -	\$ -	\$ 27,000		\$ 27,000	
3.2b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -			\$ 27,000	
3.2c	Switch Stands	0		\$ -		\$ 9,750		\$ 9,750	
3.2d	Station Service Transformer Stand	0		\$ -	\$ -		\$ -	\$ -	
3.2e	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
3.2f	Bus Support 1 Ph	0		\$ - \$ -		\$ 2,250		\$ 2,250	
3.2g 3.2h	Instrument Transformer Stand Arrester Stand	0		\$ -	\$ -	\$ 1,050 \$ 1,050		\$ 1,050 \$ 1,050	
3.211	Arrester Stand	0	EA	1 -	-	1,050	-	1,050	D24-£42

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ 4,500	\$ -	\$ 4,500	\$ -
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								1	
TOTAL - SUBST	TATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU	JIPTMENT								
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000		\$ 42,000	\$ -
						, , , , , , , , , , , , , , , , , , , ,		, ,,,,,,	
4.3	115kV								
4.3a	Circuit Breakers	1	EA	\$ -	\$ -	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
4.3b	Capacitor Banks	0		\$ -	s -	\$ -	\$ -	\$ -	\$ -
				7	*	7	Ť		7
TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ 7,000		\$ 7,000
5. SMALL EQU	IPTMENT / MATERIALS						, , , , ,		, ,,,,,
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0		\$ -	\$ -	\$ -	\$ -		\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -			\$ 2,500	
5.1f	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	· .	\$ 2,500	•
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j						,	· ·		
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	0	EA	\$ -	\$ -	\$ 1,500	'	\$ 1,500	
5.2f	Arresters	0	EA	\$ -	\$ -	\$ 2,500		\$ 2,500	\$ -
5.2g	Wave Traps	0		\$ -	\$ -	\$ 2,500	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j		1		i .	1	i .	· ·	· ·	
3.2,		1							
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -			\$ 5,500	
		0		\$ -	\$ -		\$ -		\$ -
	IVT'S	1		\$ -	\$ -	\$ -	\$ -		\$ -
5.3c	VT'S	n	I FΔ						
5.3c 5.3d	CT'S	0			<u>'</u>				
5.3c 5.3d 5.3e	CT'S CCVT'S	2	EA	\$ -	\$ -	\$ 17,500	\$ 35,000	\$ 17,500	\$ 35,000
5.3c 5.3d 5.3e 5.3f	CT'S CCVT'S Arresters	2 0	EA EA	\$ -	\$ -	\$ 17,500 \$ 1,500	\$ 35,000 \$ -	\$ 17,500 \$ 1,500	\$ 35,000 \$ -
5.3c 5.3d 5.3e 5.3f 5.3g	CT'S CCVT'S Arresters Wave Traps	2 0 0	EA EA EA	\$ - \$ - \$ -	\$ - \$ - \$ -	\$ 17,500 \$ 1,500 \$ -	\$ 35,000 \$ - \$ -	\$ 17,500 \$ 1,500 \$ -	\$ 35,000 \$ - \$ -
5.3c 5.3d 5.3e 5.3f 5.3g 5.3h	CT'S CCVT'S Arresters	2 0	EA EA EA	\$ -	\$ -	\$ 17,500 \$ 1,500 \$ - \$ -	\$ 35,000 \$ -	\$ 17,500 \$ 1,500 \$ - \$ -	\$ 35,000 \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
TOTAL - SMALL	L EQUIPTMENT / MATERIALS				\$ -		\$ 35,000		\$ 35,000
	OUSE / PANELS / GENERATOR				,		33,000		33,000
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
	Protection and Telecom Equipment Panels	2	EA	\$ -	\$ -	\$ 3,600	7	\$ 3,600	
	125VDC Batteries	0		\$ -	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0		\$ -	\$ -	š -	\$ -	\$ -	s -
	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fire Alarm	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.10	Generator	U	EA	, -	, -	, -	, -	· -	-
TOTAL - CONT	 ROL HOUSE / PANELS / GENERATOR				\$ -		\$ 7,200		\$ 7,200
7. MISC ITEMS					, -		7,200		7,200
	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
	Rigid Bus, Fittings & Insulators	0		\$ -	\$ -	\$ 42,000.00		\$ 42,000	
	Strain Bus, Connectors & Insulators	0	LS	\$ -	\$ -	\$ 21,000.00	\$ -	\$ 21,000	
	Grounding System	0	EA EA	\$ -	\$ -	\$ 21,000.00		\$ 42,000	
7.4	orounding system	0	EM	-	-	42,000.00	-	y 42,000	-
7.6									
7.7									
7.8									
7.8									
7.10									
7.11 7.12									
7.13									
7.14 7.15									
TOTAL - MISC	ITEMAC				\$ -		\$ -		\$ -
I. Greent	oush Substation - Removal				\$ -		\$ 61,200		\$ 61,200
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 612	\$ 612	\$ 612	\$ 612
	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler								
8.2	and Cost Manager, SHEQ Staff, Admin, Materials Management Staff)	1	Months			\$ 3,319	\$ 3,319	\$ 3,319	\$ 3,319
8.3	Site Accommodation, Facilities, Storage	1.0	LS	\$ -	\$ -	\$ 612	\$ 612	\$ 612	\$ 612
	Engineering							·	
8.4	Design Engineering	1.0	LS	\$ -	\$ -	\$ 4,896	\$ 4,896	\$ 4,896	\$ 4,896
	LIDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$
8.6	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$
	Surveying/Staking	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Testing & Commissioning								
8.8	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs								
8.9	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Warranties / LOC's	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Real Estate Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.13	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	_ ,	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Sales Tax on Materials	1.0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ -	\$ -	\$ -	\$ -
8.17									

NextEra T023 (Segment B Alternate) J. Pleasant Valley Substation - Install

Total: \$ 3,526,782

NextEra T023 (Segment B Alternate)									
		Supply	Installation		Total				
J. Pleasant Valley Substation - Install									
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	11,025	\$ 14,625	\$	25,65				
2. SUBSTATION FOUNDATIONS	\$	161,177	\$ 171,300	\$	332,47				
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$	88,80				
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$	280,000				
5. SMALL EQUIPTMENT / MATERIALS	\$	260,500	\$ 129,000	\$	389,50				
6. CONTROL HOUSE / PANELS	\$	560,900	\$ 253,400	\$	814,30				
7. MISC ITEMS	\$	409,950	\$ 457,275	\$	867,22				
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	131,836	\$ 596,994	\$	728,830				
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-				
SUBTOTAL:	\$	1,779,788	\$ 1,746,994	\$	3,526,78				
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-				
TOTAL:	Ś	1,779,788	\$ 1,746,994	Ś	3,526,78				

Doccri	iption of	Mor	٠.
Descii	puon o	VVOI	٨.

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Pleasa	nt Valley Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 230,000	\$ -	\$ 230,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$	27	\$ 2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	90	LF	\$	100	\$ 9,000	\$ 100	\$ 9,000	\$ 200	\$ 18,000
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35		\$ 285		\$ 320	
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 11,025		\$ 14,625		\$ 25,650
	FOUNDATIONS					, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, ,,,,,
2.1	345kV									
2.1a	Circuit Breaker Foundations	1	EA	\$	14,940	\$ 14,940	\$ 16,000	\$ 16,000	\$ 30,940	\$ 30,940
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	9	EA	\$	4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1k	Arrester Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,282
2.1n	Reactor Foundations	0	EA	\$	7,470	\$ -	\$ 8,000	\$ -	\$ 15,470	\$ -
2.1p					,					
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410		\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410		\$ 24,000	·	\$ 46,410	
	,			•			,		-,	Page 27 of 42

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
	Station Service Transformer Stand Foundation	0		\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	•
	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
	115kV								
	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	
	Capacitor Bank Foundations	0		\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600		\$ 34,034	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	
	Switch Stand Foundations	0		\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Instrument Transformer Stand Foundations	0		\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0		\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House Addition Foundation (25-ft x 50-ft)	1	EA	\$ 61,079	\$ 61,079	\$ 64,100	\$ 64,100	\$ 125,179	\$ 125,179
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	Ś -	\$ -	\$ -	\$ -
TOTAL - SUBST	TATION FOUNDATIONS				\$ 161,177		\$ 171,300		\$ 332,477
3. SUBSTATION	N STRUCTURES								
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	
	Switch Stands	1	EA	\$ 14,800	\$ 14,800		\$ 14,800	\$ 29,600	
	Station Service Transformer Stand	0		\$ 14,800	\$ -	\$ 14,800	\$ -		\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -	\$ 3,700	\$ -		\$ -
	Instrument Transformer Stand	9	EA	\$ 1,850	\$ 16,650	\$ 1,850	\$ 16,650	\$ 3,700	\$ 33,300
	Arrester Stand	3	EA	\$ 1,850	\$ 5,550	\$ 1,850	\$ 5,550	\$ 3,700	\$ 11,100
	Wave Trap Stand	1		\$ 7,400	\$ 7,400	\$ 7,400	\$ 7,400	\$ 14,800	
	Misc. Structures	0		\$ 6,475	\$ -	\$ 6,475		\$ 12,950	
3.1k			i					,	
3.1k									
	230kV								
3.2		0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2 3.2a	230kV	0		\$ 33,300 \$ 33,300		\$ 33,300 \$ 33,300		\$ 66,600 \$ 66,600	
3.2 3.2a 3.2b	230kV Substation A-Frame Structures - Stand alone		EA	\$ 33,300	\$ -		\$ -		\$ -
3.2 3.2a 3.2b 3.2c	230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA EA	\$ 33,300	\$ - \$ -	\$ 33,300 \$ 12,025	\$ -	\$ 66,600	\$ - \$ -
3.2 3.2a 3.2b 3.2c 3.2d	230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA EA	\$ 33,300 \$ 12,025	\$ - \$ - \$	\$ 33,300 \$ 12,025 \$ 12,025	\$ -	\$ 66,600 \$ 24,050	\$ - \$ - \$
3.2a 3.2b 3.2c 3.2c 3.2d 3.2e	230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand	0 0 0	EA EA EA	\$ 33,300 \$ 12,025 \$ 12,025	\$ - \$ - \$ - \$ -	\$ 33,300 \$ 12,025 \$ 12,025 \$ -	\$ - \$ - \$ - \$ -	\$ 66,600 \$ 24,050 \$ 24,050	\$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate		Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2h	Arrester Stand	0	EA	\$ 1,29		\$ 1,295	\$ -	\$ 2,590	\$ -
3.2j	Wave Trap Stand	0	EA	\$ 5,55		\$ 5,550	\$ -		\$ -
3.2k	Misc. Structures	0	EA	\$ 6,47	; \$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,50		\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,50) \$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7,95	5 \$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7,95		\$ 7,955	\$ -		\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,33		\$ 3,330			\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,85					\$ -
3.3g	Instrument Transformer Stand	0	EA) \$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$ 74		\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,70		\$ 3,700		\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,47	i \$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TATION STRUCTURES				\$ 44,400		\$ 44,400		\$ 88,800
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	1	EA	\$ 200,00		\$ 80,000	\$ 80,000		\$ 280,000
4.1b	Capacitor Banks - W/ Center Tap VT and Reactors	0	EA	\$ 370,00		\$ 80,000	\$ -	\$ 450,000	\$ -
4.1c	Circuit Breakers - Cap Switching	0	EA	\$ 220,00		\$ 750,000	\$ -	\$ 970,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV								<u> </u>
4.2a	Circuit Breakers	0	EA	\$ 250,00	+ '	\$ 80,000	\$ -	\$ 330,000	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV							·	<u> </u>
4.3a	Circuit Breakers	0	EA	\$ 225,00		\$ 60,000	\$ -	,	\$ -
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL MANIC	 DR EQUIPTMENT				\$ 200,000		\$ 80,000		\$ 280.000
	IPTMENT / MATERIALS				\$ 200,000		\$ 80,000		\$ 280,000
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	1	EA	\$ 40,00	\$ 40,000	\$ 15,000	\$ 15,000	\$ 55,000	\$ 55,000
5.1b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 35,00		\$ 17,500	\$ 17,500		\$ 52,500
5.1c	VT'S	3	EA	\$ 25,00		\$ 12,000	\$ 36,000	\$ 37,000	\$ 111,000
5.1d	CT'S	3	EA	\$ 13,00		\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1e	CCVT'S	3	EA	\$ 13,00				\$ 21,000	\$ 63,000
5.1f	Arresters	3	EA	\$ 6,50		\$ 1,500		\$ 8,000	\$ 24,000
5.1g	Wave Traps	1	EA	\$ 13,00		\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
5.1h	Station Service Transformers	0	EA	\$ 200,00		\$ 50,000	. ,	\$ 250,000	
5.1j					1	7 22,000	*	+ =====================================	*
,									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,00) \$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,00	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$ 13,00		\$ 8,000		\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$ 13,00) \$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$ 10,000) \$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,00) \$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,00) \$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
	Line Switches - 3ph w/ motor operator	0		\$ 33,00		\$ 15,000		\$ 48,000	
5.3a			EA	\$ 28,00) \$ -	\$ 17,500	\$ -	\$ 45,500	•
5.3b	Disconnect Switches - 3ph w/ manual operator	0							
5.3b 5.3c	VT'S	0	EA	\$ 13,00		\$ 8,000		\$ 21,000	
5.3b 5.3c 5.3d	VT'S CT'S	0	EA EA	\$ 13,000 \$ 13,000) \$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.3b 5.3c 5.3d 5.3e	VT'S CT'S CCVT'S	0 0 0	EA EA EA	\$ 13,000 \$ 13,000 \$ 8,000) \$ -) \$ -	\$ 8,000 \$ 8,000	\$ - \$ -	\$ 21,000 \$ 16,000	\$ - \$ -
5.3b 5.3c 5.3d 5.3e 5.3f	VT'S CT'S CCVT'S Arresters	0 0 0	EA EA EA	\$ 13,000 \$ 13,000 \$ 8,000 \$ 3,420) \$ -) \$ -) \$ -	\$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$	\$ 21,000 \$ 16,000 \$ 9,420	\$ - \$ - \$ -
5.3b 5.3c 5.3d 5.3e	VT'S CT'S CCVT'S	0 0 0	EA EA EA EA	\$ 13,000 \$ 13,000 \$ 8,000 \$ 3,420 \$ -) \$ -) \$ -	\$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ -	\$ 21,000 \$ 16,000 \$ 9,420 \$ -	\$ - \$ -

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	1	TOTAL
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
	L EQUIPTMENT / MATERIALS				\$ 260,500		\$ 129,000		\$	389,500
	OUSE / PANELS / GENERATOR	4	F.A.	ć 225.000	ć 225.000	¢ 05.000	ć 05.000	ć 440.000		440.000
6.1	Control House Addition (25-ft x 50-ft)	1	EA	\$ 325,000	\$ 325,000	\$ 85,000	\$ 85,000	\$ 410,000	\$	410,000
6.2	Protection and Telecom Equipment Panels	3	EA	\$ 35,000	\$ 105,000	\$ 12,500	\$ 37,500	\$ 47,500	\$	142,500
6.3	125VDC Batteries	0	EA	\$ 75,000	\$ -	\$ 25,000	\$ -	\$ 100,000		-
6.4	Control Cables	1	LS	\$ 130,900	\$ 130,900			\$ 261,800		261,800
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0	EA	\$ 50,000	\$ -			\$ 150,000		-
6.7	DC Distribution System	0	EA	\$ 50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.8	Security	0	EA	\$ 7,500	\$ -	\$ 7,500		\$ 15,000		-
6.9 6.10	Fire Alarm	0	EA EA	\$ 7,500 \$ 100,000	\$ -	\$ 7,500	\$ -	\$ 15,000		-
6.10	Generator	U	EA	\$ 100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	>	-
TOTAL - CONT	 ROL HOUSE / PANELS / GENERATOR				\$ 560,900		\$ 253,400		\$	814,300
7. MISC ITEMS					J 500,900		255,400		7	014,300
7. IVIISC ITEIVIS	Conduit & Cable Trench System	800	LF	\$ 185.00	\$ 148,000	\$ 170.00	\$ 136,000	\$ 355	Ś	284,000
7.1	Rigid Bus, Fittings & Insulators	0	LF	\$ 125.07	\$ 148,000			\$ 362		- 204,000
				· · · · · · · · · · · · · · · · · · ·						
7.3	Strain Bus, Connectors & Insulators	2,500	LF	\$ 13.38	\$ 33,450		·	\$ 53		131,825
7.4	Grounding System	0	LF	\$ 6.93	\$ -	\$ 32.58	ļ\$ -	\$ 40	\$	-
7.5	Strain Bus Insulators - 345kV	38	EA	\$ 2,000	\$ 76,000	\$ 1,050	\$ 39,900	\$ 3,050	\$	115,900
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -	\$ 750	\$ -	\$ 2,150		-
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$	-
7.8	Low Voltage AC Station Service	0	LS	\$ 50,000	\$ -	\$ 75,000	\$ -	\$ 125,000		-
7.9	SSVT Service	0	LS	\$ 45,000	\$ -	\$ 45,000		\$ 90,000	\$	-
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 62,500	\$ 62,500	\$ 75,000	\$ 75,000	\$ 137,500	\$	137,500
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 90,000	\$ 90,000	\$ 108,000	\$ 108,000	\$ 198,000	\$	198,000
7.12										
7.13										
7.14										
7.15										
7.16 7.17										
7.17										
7.18										
7.20										
7.21										
7.22										
7.23										
7.24										
7.25										
TOTAL - MISC	ITEMS				\$ 409,950		\$ 457,275		\$	867,225
	nt Valley Substation - Install				\$ 1,647,952		\$ 1,150,000		\$	2,797,952
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
0.1	Contractor Mobilization / Demobilization	1.0	LS	\$ -	\$ -	\$ 27.980	\$ 27.980	\$ 27.980	<u> </u>	27.000
8.1	Mob / Demob Project Management, Material Handling & Amenities	1.0	LS	· -		\$ 27,980	\$ 27,980	\$ 27,980	,	27,980
8.2	Project Management, Waterian Handling & Amendes Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 174,493	\$ 174,493	\$ 174,493	\$	174,493
					_	A				
8.3	Utility PM and Project Oversite	1		ć	\$ -					27,980
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 27,980	\$ 27,980	\$ 27,980	>	27,980
8.5	Engineering Decign Engineering	1	LS	\$ -	\$ -	\$ 223,836	\$ 223,836	\$ 223,836	ć	222 026
8.6	Design Engineering LiDAR		LS	\$ -	\$ -		\$ 223,836		\$	223,836
8.6	Geotech	- 4	EA EA	\$ -	\$ -	\$ 3,500				14,000
8.8	Surveying/Staking	1	Site	\$ -	\$ -	\$ 19,586				19,586
3.0	Testing & Commissioning	1	- Site	7		7 13,360	7 13,360	y 13,300	Ť	13,300
	· · · · · · · · · · · · · · · · · · ·	l .		1	I .	1	1		L	

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$		\$ -	\$ 69,949	\$ 69,949	\$ 69,949	\$ 69,949
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$		\$ -	\$ 8,394	\$ 8,394	\$ 8,394	\$ 8,394
8.13	Real Estate Costs (New)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	131,836	\$ 131,836	\$ -	\$ -	\$ 131,836	\$ 131,836
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 2,798	\$ 2,798	\$ 2,798	\$ 2,798
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 131,836		\$ 596,994		\$ 728,830

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J. SS Pleasant Valley-Install

NextEra T023 (Segment B Alternate)

Interconnection Knickerbocker Station

Estimate Revision: 5 Total: \$ 1,827,190

NextEra T023 (Segment B Al	ternate)			
		Supply	Installation	Total
L. Interconnection Knickerbocker Station				
1. CLEARING & ACCESS	\$	-	\$ 436,850	\$ 436,850
2. FOUNDATIONS	\$	238,638	\$ 241,194	\$ 479,832
3. STRUCTURES	\$	313,836	\$ 219,711	\$ 533,547
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	58,150	\$ 26,466	\$ 84,616
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	48,850	\$ 243,495	\$ 292,345
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	659,474	\$ 1,167,716	\$ 1,827,190
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	659,474	\$ 1,167,716	\$ 1,827,190

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
L. Interc	onnection Knickerbocker Station									
1. CLEARING 8	ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	525.0	LF	\$	-	\$ -	\$ 70	\$ 36,750	\$ 70	\$ 36,750
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$		\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	35,000.0	SF	\$	-	\$ -	\$ 4	\$ 123,200	\$ 4	\$ 123,200
1.10	Restoration for Work Pad areas	7,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 1,050	\$ 0	\$ 1,050
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2	,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$	750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18						\$ -		\$ -		\$ -
1.19						\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEAR	RING & ACCESS					\$ -		\$ 436,850		\$ 436,850
2. FOUNDATIO	DNS									
2.1	Drilled Pier - 345KV THREE POLE TAP, STEEL	2	Structures	\$ 119	,319	\$ 238,638	\$ 120,597	\$ 241,194	\$ 239,916	\$ 479,832
2.2										
2.3										
2.4										
2.5	Rock Excavation Adder	-	CY	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.6						\$ -		\$ -		\$ -
2.7						\$ -		\$ -		\$ -

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Item	item Description	Estimated Quantity	Unit of Measure	Material Supply		Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.8					\$			\$ -		\$ -
2.9					\$			\$ -		\$ -
2.10					\$			\$ - \$ -		\$ - \$ -
2.11					\$			\$ -) -
2.13					Ś			\$ -		, - \$ -
2.14					Ś			\$ -		<u>,</u>
2.15					\$	-		\$ -		, \$ -
TOTAL - FOUNI	DATIONS				\$	238,638		\$ 241,194		479,832
3. STRUCTURES	5									
	345KV THREE POLE TAP, STEEL	2	Structure	\$ 15	55,400 \$	310,800	\$ 93,240	\$ 186,480	\$ 248,640	\$ 497,280
3.2										
3.3										
3.4					\$			\$ -		\$ -
3.5	Install Grounding and Grounding Accessories	6	Pole	\$	506 \$	-,	\$ 5,539	\$ 33,231		
3.6				-	\$			\$ -		\$ -
3.7				-	\$			\$ - \$ -		\$ - \$ -
3.8				 	\$			\$ -) -
3.10				 	Ś			\$ -		, -
3.11					\$			\$ -		\$ -
3.12					\$			\$ -		\$ -
3.13					\$	-		\$ -		, \$ -
3.14					\$	-		\$ -		\$ -
3.15					\$	-		\$ -		\$ -
TOTAL - STRUC	TURES				\$	313,836		\$ 219,711		533,547
4. CONDUCTOR	R, SHIELDWIRE, OPGW									
4.1	345kV - (1) 1,033kcmil 54/7 ACSS "Curlew"	-	LF	\$	2.82 \$	-	\$ 5.00	\$ -	\$ 7.82	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35 \$	-	\$ 5.00		\$ 6.35	
4.3	(1) 3/8" EHS7 Steel	-	LF	\$	0.47 \$	-	\$ 5.00	\$ -	\$ 5.47	•
	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$	- \$		\$ 30,000	\$ -	,	\$ - •
4.6	Remove Existing OPGW Cable Remove Existing EH7	-	Mile Mile	\$	- \$ - \$	-	\$ 12,000	\$ -	, ,,,,,,,	\$ <u>-</u>
4.7	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$	- \$ 1.90 \$	-	\$ 12,000 \$ 5.00	\$ -		\$ - \$ -
4.8	113KV - (1) 534KCIIII 34/7 AC33 Caldillai	-	LF	,	1.50 7	-	3.00	· -	Ş 0.90	· -
	Rider Poles - Relocated	-	Set	\$	- \$	-	\$ 3,500	\$ -	\$ 3,500.00	\$ -
	Rider Poles	-	EA		1,750 \$	-	\$ 3,500	\$ -	\$ 5,250.00	
	JCTOR, SHIELDWIRE, OPGW:				\$	-		\$ -		\$ -
	FITTINGS, HARDWARE									
	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly		1,800 \$	-	\$ 720		\$ 2,520	
	115kV Tangent (1-Group of 9-Bells Each Assembly)	- 20	Assembly	\$	900 \$		\$ 560	\$ -	\$ 1,460	<u> </u>
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	30	Assembly	\$	1,800 \$ 900 \$	54,000	\$ 720 \$ 560		\$ 2,520 \$ 1,460	\$ 75,600 \$ -
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) OPGW Assembly - Tangent	-	Assembly Assembly	\$	200 \$	-	\$ 150	\$ - \$ -	\$ 1,460	•
	OPGW Assembly - Langent OPGW Assembly - Angle / DE	2	Assembly	\$	250 \$	500	\$ 150	<u>'</u>		
	OHSW Assembly - Tangent	-	Assembly	\$	200 \$	-		\$ -	\$ 350	•
	OHSW Assembly - Angle / DE	2	Assembly	\$	250 \$	500	\$ 150	\$ 300		\$ 800
5.9	OPGW Splice Boxes	1	Set		1,750 \$	1,750	\$ 1,746	\$ 1,746	\$ 3,496	-,
	OPGW Splice & Test	1	EA		1,400 \$	1,400	\$ 2,520			
	Spacer - Conductor	-	EA	\$	50 \$	-	\$ 35		\$ 85	
	Vibration Dampers - Conductor	-	EA	\$	35 \$		\$ 35		\$ 70	•
	Shieldwire / OPGW Dampers, Misc. Fittings Guys, Anchors, and Accessories	-	EA EA	\$	27 \$ 720 \$	-	\$ 35 \$ 885	\$ - \$ -	\$ 62 \$ 1,605	•
5.45	Misc. materials (Signs and Markers)	-	Mile	\$	770 \$		\$ 1,006		\$ 1,005	
5.16				T			- 1,000	Ŧ	1,770	
5.17		-								
5.18										
5.19										
5.20										
TOTAL - INSULA	ATOR, FITTINGS, HARDWARE				\$	58,150		\$ 26,466		84,616
Lintorce	onnection Knickerbocker Station				\$	610,624		\$ 924,221		1,534,845
					3	010,024		7 324,221		1,334,643
6. MOR/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 15,348	\$ 15,348	\$ 15,348	\$ 15,348
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 95,720	\$ 95,720	\$ 95,720	\$ 95,720
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 15,348	\$ 15,348	\$ 15,348	\$ 15,348
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 15,348	\$ 15,348	\$ 15,348	\$ 15,348
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 76,742	\$ 76,742	\$ 76,742	\$ 76,742
6.6	Lidar	1	LS	\$ -	\$ -	\$ 4,605	\$ 4,605	\$ 4,605	\$ 4,605
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 10,744	\$ 10,744	\$ 10,744	\$ 10,744
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 40,000	\$ -	\$ 40,000	\$ -
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 4,605	\$ 4,605	\$ 4,605	\$ 4,605
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 48,850	\$ 48,850	\$ -	\$ -	\$ 48,850	\$ 48,850
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 1,535	\$ 1,535	\$ 1,535	\$ 1,535
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 48,850		\$ 243,495		\$ 292,345

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NextEra T023 (Segment B Alternate) M. Interconnection Churchtown Station

Estimate	F		Total:	ċ	5,182,778	
Revision:	3		i Otal.	Ą	3,102,770	
	NextEra T023 (Sec	gment B Alterna	te)			
			Supply		Installation	Total
	M. Interconnection Churchtown Station					
	1. CLEARING & ACCESS	\$	-	\$	712,850	\$ 712,850
	2. FOUNDATIONS	\$	758,142	\$	859,756	\$ 1,617,898
	3. STRUCTURES	\$	838,481	\$	581,612	\$ 1,420,092
	4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$ -
	5. INSULATORS, FITTINGS, HARDWARE	\$	416,550	\$	172,266	\$ 588,816
	6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	161,054	\$	682,068	\$ 843,122
	CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$ -
	SUBTOTAL:	\$	2,174,226	\$	3,008,553	\$ 5,182,778
	CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$ -
	TOTAL:	\$	2,174,226	\$	3,008,553	\$ 5,182,778
Description	n of Work:					

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	y Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	connection Churchtown Station									
1. CLEARING 8	A ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	1,425.0	LF	\$	-	\$ -	\$ 70	\$ 99,750	\$ 70	\$ 99,750
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	95,000.0	SF	\$	-	\$ -	\$ 4	\$ 334,400	\$ 4	\$ 334,400
1.10	Restoration for Work Pad areas	19,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 2,850	\$ 0	\$ 2,850
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA		2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$	750		\$ 1,250			\$ -
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18						\$ -		\$ -		\$ -
1.19						\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27	· ·	\$ 75		\$ 102	\$ -
	RING & ACCESS					\$ -		\$ 712,850		\$ 712,850
2. FOUNDATIO	DNS									
2.1	Drilled Pier - 345KV S/C DEADEND, STEEL	15	Structures	\$ 5	50,543	\$ 758,142	\$ 30,650	\$ 459,756	\$ 81,193	\$ 1,217,898
2.2										
2.3										•
2.4										
2.5	Rock Excavation Adder	200	CY	\$	-	\$ -	\$ 2,000	\$ 400,000	\$ 2,000	\$ 400,000
2.6						\$ -		\$ -		\$ -
2.7						\$ -		\$ -		\$ -
2.8						\$ -		\$ -		\$ -

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Estimate

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.9						\$ -		\$ -		\$	-
2.10						\$ -		\$ -		\$	-
2.11						\$ -		\$ -		\$	-
2.12						\$ -		\$ -		\$	-
2.13						\$ -		\$ -		\$	-
2.14						\$ -		\$ -		\$	-
2.15						\$ -		\$ -		\$	
TOTAL - FOUN				_		\$ 758,142		\$ 859,756		\$	1,617,898
3. STRUCTURE		45	<u> </u>		55.000	d 000 004	4 22.225	400.534	4 00.500		4 222 425
3.1	345KV S/C DEADEND, STEEL	15	Structure	\$	55,393	\$ 830,891	\$ 33,236	\$ 498,534	\$ 88,628	\$	1,329,425
3.2											
3.3				_		A		<u> </u>			
3.4	In shall Construction and Construction Assessment	4.5	D-I-		FOC	\$ -	ć 5.520	\$ -	ć C045	\$	-
3.5	Install Grounding and Grounding Accessories	15	Pole	\$	506	\$ 7,590	\$ 5,539	\$ 83,078	\$ 6,045	\$	90,668
3.6						\$ -		\$ -		\$	-
3.7				_		\$ -		\$ -		\$	-
3.8				1		\$ -		\$ -		\$	-
3.9				-		\$ - \$ -		\$ - \$ -		\$	-
3.10				-		•				\$	-
3.11						\$ - \$ -		\$ - \$ -		\$	-
3.12										\$	
3.13				1		\$ - \$ -		\$ - \$ -		\$	-
				_				•		· ·	
3.15						\$ -		\$ -		\$	-
TOTAL - STRU	CTURES					\$ 838,481		\$ 581,612		\$	1,420,092
	R, SHIELDWIRE, OPGW					7 000,102		* ****		i –	
		-	LF	Ś	1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$	
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571		LF LF	+	1.35		\$ 5.00	-	\$ 6.35	\$	
4.2	(1) 3/8" EHS7 Steel	-	LF	\$	0.47			\$ - \$ -	\$ 5.47		-
4.5	Remove Existing 115kV Cable From Existing Structures	-	Mile	Ś	- 0.47	\$ -		\$ -	\$ 30,000.00	\$	-
4.5	Remove Existing DPGW Cable Remove Existing OPGW Cable	-	Mile	Ś	-	\$ -		\$ -		\$	-
4.6	Remove Existing OFGW Cable Remove Existing EH7	-	Mile	\$	-	\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$	
4.8	115kV - (1) 795kcmil 26/7 ACSS "Drake"	-	LF	\$	1.72		\$ 5.00	<u>'</u>	\$ 12,000.00		-
4.8	113KV - (1) 793KCIIIII 20/7 AC33 DI AKE	-	LF	٦	1.72	· -	3 3.00	-	ÿ 0.72	_	
4.10	Rider Poles - Relocated	-	Set	Ś	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	Ġ	-
4.11	Rider Poles	-	EA	Ś	1,750	•	\$ 3,500	\$ -	\$ 5,250.00	\$	-
	UCTOR, SHIELDWIRE, OPGW:	-	LA .	7	1,730	\$ -	5 3,300	\$ -	ÿ 3,230.00	Ś	-
	, FITTINGS, HARDWARE					, -		<u>-</u>		,	_
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$	1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$	-
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900			\$ -		\$	
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	225	Assembly	\$	1,800			\$ 162,000		\$	567,000
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900			\$ 102,000	\$ 2,320		-
5.5	OPGW Assembly - Tangent	16	Assembly	\$	200			\$ 2,400	\$ 350	\$	5,600
5.6	OPGW Assembly - Yangerit	4	Assembly	\$	250			\$ 600		Ś	1,600
5.7	OHSW Assembly - Tangent	16	Assembly	\$	200		\$ 150	\$ 2,400		Ś	5,600
5.8	OHSW Assembly - Tangent OHSW Assembly - Angle / DE	4	Assembly	\$	250			\$ 600		Ś	1,600
5.9	OPGW Splice Boxes	1	Set	\$	1,750						3,496
5.10	OPGW Splice & Test	1	EA	\$	1,400			\$ 2,520		\$	3,920
5.11	Spacer - Conductor	-	EA	\$	50			\$ -	\$ 3,320		
5.12	Vibration Dampers - Conductor	-	EA	\$	35		\$ 35		\$ 70		-
	· ·			_							
5.13	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$	-
5.14	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.15	Misc. materials (Signs and Markers)	_	Mile	\$	770		\$ 1,006		\$ 1,776		
5.16			me	Ť	,,,	\$ -		\$ -	- 1,770	Ś	
5.17						Ŧ		Ŧ		 -	
5.17				T							
5.19				<u> </u>							
5.20				T							
	ATOR, FITTINGS, HARDWARE					\$ 416,550		\$ 172,266		Ś	588,816
	connection Churchtown Station					\$ 2,013,172		\$ 2,326,484		\$	4,339,656
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Su	pply Rate	Material Supply Cost	Equipment ly Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 43,397	\$ 43,397	\$ 43,397	\$	43,39
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 270,641	\$ 270,641	\$ 270,641	\$	270,64
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 43,397	\$ 43,397	\$ 43,397	\$	43,39
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 43,397	\$ 43,397	\$ 43,397	\$	43,39
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 216,983	\$ 216,983	\$ 216,983	\$	216,983
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 13,019	\$ 13,019	\$ 13,019	\$	13,01
6.7	Geotech	1	Location	\$	-	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$	3,50
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 30,378	\$ 30,378	\$ 30,378	\$	30,37
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$	-	\$ -	\$ 40,000	\$ -	\$ 40,000	\$	-
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 13,019	\$ 13,019	\$ 13,019	\$	13,01
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.15	Legal Fees	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$	161,054	\$ 161,054	\$ -	\$ -	\$ 161,054	\$	161,05
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 4,340	\$ 4,340	\$ 4,340	\$	4,340
TAL - MOE	B/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 161.054		\$ 682,068		Ś	843.12

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M. In. Churchtown SS

NextEra T023 (Segment B Alternate) N. Interconnection Milan Station

Total: \$ 714,622

			•	, -		
NextEra T023 (Segn	nent B Alternate)				
		Supply		Installation		Total
N. Interconnection Milan Station						
1. CLEARING & ACCESS	\$	-	\$	121,100	\$	121,100
2. FOUNDATIONS	\$	84,375	\$	135,279	\$	219,654
3. STRUCTURES	\$	130,328	\$	88,667	\$	218,994
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-
5. INSULATORS, FITTINGS, HARDWARE	\$	27,200	\$	11,280	\$	38,480
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	19,352	\$	97,042	\$	116,394
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	261,255	\$	453,367	\$	714,622
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL.	ė	201 200	ė	452.267	ė	714 622

Description	of Work:									
Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Inter	connection Milan Station									
1. CLEARING	& ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	1.0	Acre	\$	-	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
1.3	Access Road	_	LF	Ś	-	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	500.0	LF	\$	_	\$ -	\$ 4			\$ 2,000
1.5	Matting - Access and ROW	500.0	LF	\$	-	\$ -	\$ 70			, , , , , , , , , , , , , , , , , , , ,
1.6	Matting - To Work Area	525.0	LF	\$	-	\$ -	\$ 70			\$ 36,750
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800	\$ -		\$ -
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000		\$ 5,000
1.9	Work Pads	10,000.0	SF	\$	-	\$ -	\$ 4			\$ 35,200
1.10	Restoration for Work Pad areas	2,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 300	\$ 0	\$ 300
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$	750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18						\$ -		\$ -		\$ -
1.19						\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEA	RING & ACCESS					\$ -		\$ 121,100		\$ 121,100
2. FOUNDATI	ONS									
2.1	Drilled Pier - 115kV Single Circuit Single Pole Angle/DE	2	EA	\$	42,187	\$ 84,375	\$ 42,639	\$ 85,279	\$ 84,827	\$ 169,654
2.2										
2.3										
2.4										
2.5	Rock Excavation Adder	25	СҮ	\$	-	\$ -	\$ 2,000	\$ 50,000	\$ 2,000	\$ 50,000
2.6						\$ -		\$ -		\$ -
2.7						\$ -		\$ -		\$ -
2.8						\$ -		\$ -		\$ -
2.9						\$ - \$ -		\$ - \$ -		\$ - \$ -
J 2.10		1	I	1		> -		> -		> -

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Estimate

Revision:

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	• Material	Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.11					\$	-		\$ -		\$ -
2.12					\$	-		\$ -		\$ -
2.13					\$	-		\$ - \$ -		\$ - \$ -
2.15					\$	-		\$ -		\$ -
TOTAL - FOUND	DATIONS				\$	84,375		\$ 135,279		\$ 219,654
3. STRUCTURES										
	115kV Single Circuit Single Pole Angle/DE	2	Structure	\$ 64,658	3 \$	129,316	\$ 38,795	\$ 77,590	\$ 103,453	\$ 206,905
3.2										
3.3 3.4					Ś	-		\$ -		\$ -
3.5	Install Grounding and Grounding Accessories	2	Pole	\$ 506	7	1,012	\$ 5,539	\$ 11,077		\$ 12,089
3.6		_		,	\$	-	7 0,000	\$ -	7 2,515	\$ -
3.7					\$	-		\$ -		\$ -
3.8					\$	-		\$ -		\$ -
3.9					\$	-		\$ -		\$ -
3.10					\$	-		\$ - \$ -		\$ - \$ -
3.11					\$	-		\$ - \$ -		\$ - \$ -
3.13					\$	-		\$ -		\$ -
3.14					\$	-		\$ -		\$ -
3.15					Ś	-		\$ -		\$ -
	TUDEC					420.220		•		•
TOTAL - STRUC					\$	130,328		\$ 88,667		\$ 218,994
	R, SHIELDWIRE, OPGW						Å 5.00	<u> </u>	4 500	
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571	-	LF LF	\$ 1.90 \$ 1.35		-	\$ 5.00 \$ 5.00	\$ - \$ -		\$ - \$ -
4.3	(1) 07GW 30 Fiber AC-33/38/371 (1) 3/8" EHS7 Steel	-	LF	\$ 0.47		-	\$ 5.00	\$ -		\$ -
	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$ -		-	\$ 30,000	\$ -		\$ -
4.6	Remove Existing OPGW Cable	-	Mile	\$ -	\$	-	\$ 12,000	\$ -	\$ 12,000.00	\$ -
4.7	Remove Existing EH7	-	Mile	\$ -		-	\$ 12,000	\$ -	, , , , , , , , ,	\$ -
	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90) \$	-	\$ 5.00	\$ -	\$ 6.90	\$ -
4.9 4.10	Rider Poles - Relocated	-	Set	\$ -	\$	-	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$ 1,750	7	-	\$ 3,500	т		\$ -
	ICTOR, SHIELDWIRE, OPGW:			2,7.5.	\$	-	9,500	\$ -	7 0,200.00	\$ -
5. INSULATOR,	FITTINGS, HARDWARE									
	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800		-	\$ 720	\$ -	, ,	\$ -
	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 1,800		-	\$ 560	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	14	Assembly	\$ 1,800		25,200	\$ 720 \$ 560	\$ 10,080 \$ -		\$ 35,280
5.4 5.5	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly Assembly	\$ 900	9	-	\$ 500	\$ -	·	\$ - \$ -
	OPGW Assembly - Tangent	-	Assembly	\$ 200) 5	-	\$ 150	\$ -		\$ -
	OPGW Assembly - Angle / DE	4	Assembly	\$ 250		1,000	\$ 150	\$ 600		\$ 1,600
5.8	OHSW Assembly - Tangent	-	Assembly	\$ 200	\$	-	\$ 150	\$ -	\$ 350	\$ -
	OHSW Assembly - Angle / DE	4	Assembly	\$ 250		1,000	\$ 150	\$ 600		\$ 1,600
	OPGW Splice Boxes	-	Set	\$ 1,750		-	\$ 1,746	\$ -	,	\$ -
	OPGW Splice & Test Spacer - Conductor	-	EA EA	\$ 1,400		-	\$ 2,520 \$ 35	\$ - \$ -	1 -7	\$ - \$ -
	Vibration Dampers - Conductor	-	EA	\$ 35		-	\$ 35			\$ -
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$ 27	7 \$	-	\$ 35	\$ -	\$ 62	\$ -
	Guys, Anchors, and Accessories	-	EA	\$ 720		-	\$ 885	\$ -		\$ -
	Misc. materials (Signs and Markers)	-	Mile	') \$	-	\$ 1,006	т	, , , , , , , , , , , , , , , , , , , ,	\$ -
5.17										
5.18										
5.19										
5.20	ATOR, FITTINGS, HARDWARE				\$	27,200		\$ 11,280		\$ 38,480
								,		
	onnection Milan Station				\$	241,903		\$ 356,325		\$ 598,228
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization				1.			_		
6.1	Mob / Demob	1	LS	\$ -	\$	-	\$ 5,982	\$ 5,982	\$ 5,982	\$ 5,982

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e Mat	terial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	то	DTAL
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 37,308	\$ 37,308	\$ 37,308	\$	37,308
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 5,982	\$ 5,982	\$ 5,982	\$	5,982
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 5,982	\$ 5,982	\$ 5,982	\$	5,982
	Engineering										
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 29,911	\$ 29,911	\$ 29,911	\$	29,911
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 1,795	\$ 1,795	\$ 1,795	\$	1,795
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$	3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 4,188	\$ 4,188	\$ 4,188	\$	4,188
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$		\$ -	\$ -	\$ -	\$	-
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 1,795	\$ 1,795	\$ 1,795	\$	1,795
6.13	Real Estate Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.14	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.16		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.17	Sales Tax on Materials	1	LS	\$ 19,352	2 \$	19,352	\$ -	\$ -	\$ 19,352	\$	19,352
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 598		\$ 598	\$	598
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	19,352		\$ 97,042		\$	116,394

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NextEra - T023 - (Segment B)

O. System Upgrade Facilities (Cricket Valley to Long Mt. Line)

Estimate Revision: Total: \$ 3,943,950

SYSTEM UPG	RADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Ra	ate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF 1	Transmission Line Upgrade Cricket Valley - Connecticut Border to Long Mountain (3.3 + 6.0 = 9.3 Miles)									
1.1	345kV - (1) 954kcmil 45/7 ACSS "Rail" Conductor (Cricket Vly to Conn Border)	109,771.20	LF	\$ 2.5	50	\$ 274,428	\$ 5.00	\$ 548,856	\$ 8	\$ 823,284
1.2	345kV - (1) 2312kcmil 76/19 ACSS "Thrasher" Conductor (Conn Border to Long Mtn.)	99,792.00	LF	\$ 8.0	00	\$ 798,336	\$ 5.00	\$ 498,960	\$ 13	\$ 1,297,296
1.3	Remove Existing 795 ACSS Conductor and Accessories (Cricket VIy to Conn Border)	3.30	Mile	\$ -		\$ -	\$ 30,000.00	\$ 99,000	\$ 30,000	\$ 99,000
1.4	Remove Existing 2156kmil ACSS Conductor and Accessories (Conn Border to Long Mtn.)	6.00	Mile	\$ -		\$ -	\$ 30,000.00	\$ 180,000	\$ 30,000	\$ 180,000
1.5	Rider Poles	10.00	Sets	\$ 1,750.0	00	\$ 17,500	\$ 3,500.00	\$ 35,000	\$ 5,250	\$ 52,500
1.6	345kV Vertical Tangent Insulator Assembly	147.00	Assembly	\$ 1,800.0	00	\$ 264,600	\$ 720.00	\$ 105,840	\$ 2,520	\$ 370,440
1.7	345kV Deadend Insulator Assembly	132.00	Assembly	\$ 1,800.0	00	\$ 237,600	\$ 720.00	\$ 95,040	\$ 2,520	\$ 332,640
	Subtotal SUG 1 Direct Cost					\$ 1,592,464		\$ 1,562,696		\$ 3,155,160
2	Indirect Cost (25% of Direct Cost)		·			\$ 398,116		\$ 390,674		\$ 788,790
	TOTAL:					\$ 1,990,580		\$ 1,953,370		\$ 3,943,950

	NextEra T023 (Segment B Alternate)
	ESTIMATE ASSUMPTIONS & CLARIFICATIONS
1	Cost Estimate is based on 2017 rates.
2	Construction schedule is in accordance with proposed schedule - we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
3	We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
4	All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
5	We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type. 20% of the total length of the line is assumed to use Type 1 Gravel road and 80% of the line length access to be used wood matting. In addition 75 feet of wood matting is included from the access matting to the work pad area matting. The estimate also include 5,000 square feet of wood matting for each structure work area within the ROW. For the ground restoration (seed, straw and woven mat), 20% of the work pad area included.
6	Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
7	Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
8	Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
9	A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
10	We have assumed that all project details provided are accurate unless noted otherwise.
11	Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
12	A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
13	A contractor allowance of 5.423% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
14	An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
15	A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
16	An allowance of 5% for transmission design and engineering has been included in the total section.
17	An allowance of 8% for substation design and engineering has been included in the total section.
18	An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
19	An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
20	An allowance of 3.75% for substation testing and commissioning has been included in the total section.
21	An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
22	New York state sales tax of 8% is included in all material pricing.
23	An allowance of 1.5% for insurance is included in the DPS sheet.
24	From Churchtown to Pleasant Valley; Churchtown loop around 345kV conductor 0.3 miles have been added.
25	An additional Quantity of 5% have been added to conductors, OPGW, & OHSW for sag and jumpers. Rock excavation not provided in proposal foundation data, most of the foundation are concrete pole direct embedded, rock excavation assumed 50% for T022 (Churchtown to Pleasant
26	Valley) and rest 75% of quantities of National Grid's proposal.
	Cricket Valley to Long Mountain line upgrade: The length of the re-conductor between Cricket Valley and the NY/CT border is 3.3 miles and will remove the existing (to be installed on CV
	project) 2 bundle 795 ACSS conductor and install new 2 bundle Rail 954 ACSS conductor.
	-The length of the re-conductor between the NY/CT border and Long Mountain is 6 miles and will remove the existing single 2156 ACSS conductor and install new single Thrasher 2312
27	ACSS conductor.
-	-The Insulators and associated conductor hardware will be replaced.
	-The existing structures are assumed to have adequate strength to support the new conductors.
	-The estimate is a rough order of magnitude estimate as no engineering was performed and SECo did not have access to record drawings.
28	The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.
	1



		NY Power Authority and North American Transmission (T029)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$33,958
	1.2	Foundations	\$17,769
	1.3	Structures	\$52,916
	1.4	Conductor, Shiedwire and OPGW	\$30,069
	1.5	Insulators, Fitting and Hardwares	\$11,442
		Subtotal (1)	\$146,154
ı,	2	Substations	
Direct Cost	2.1	Knickerbocker Substation	\$14,982
rect	2.2	East Greenbush Substation	\$61
Ι	2.3	Schodack Substation	\$2,226
	2.4	Churchtown Substation	\$15,925
	2.5	Pleasant Valley Substation	\$2,798
	2.6	Substation Interconnections	\$5,495
		Subtotal (2)	\$41,487
		Total (1+2)	\$187,641
		Contractors Mark-up (15% of Total 1+2)	\$28,146
		Total Direct Cost (A)	\$215,787
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$1,876
st	3.2	Project Management, Material Handling & Amenities	\$15,334
t Co	3.3	Engineering	\$12,503
Indirect Cost	3.4	Testing & Commissioning	\$973
luc	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$14,135
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628
		Total Indirect Cost (3)	\$52,449
		Subtotal Project Cost (B=A+3) 2017 \$	\$268,236
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project (Middletown Line and Terminal)	\$16,261
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417
		Subtotal NUF Cost (C)	
		Total Project Cost (B+C) 2017 \$	\$288,914
		Total Project Cost 2018 \$	\$297,581

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NAT - NYPA - T029 - (Segment B)

Estimate Revision: 5

	NAT - NYPA - T029 - (Segment B) - Direct Costs		Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Knickerbocker to Churchtown	\$	53,833,887
Direct Labor, Material & Equipment Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	87,573,376
Direct Labor, Material & Equipment Costs	C. Blue Stores Junction to Blue Stores Substation	\$	4,746,361
Direct Labor, Material & Equipment Costs	D. Knickerbocker 345kV Substation - Install	\$	14,982,000
Direct Labor, Material & Equipment Costs	E. Greenbush Substation - Removal	\$	61,200
Direct Labor, Material & Equipment Costs	F. Schodack Substation - Install	\$	2,089,357
Direct Labor, Material & Equipment Costs	G. Schodack Substation - Removal	\$	136,200
Direct Labor, Material & Equipment Costs	H. Churchtown Substation - Install	\$	15,046,621
Direct Labor, Material & Equipment Costs	I. Churchtown Substation - Removal	\$	878,578
Direct Labor, Material & Equipment Costs	J. Pleasant Valley Substation - Install	\$	2,797,952
Direct Labor, Material & Equipment Costs	K. Interconnection Milan Station	\$	675,154
Direct Labor, Material & Equipment Costs	L. Interconnection Knickerbocker Station	\$	1,206,222
Direct Labor, Material & Equipment Costs	M. Interconnection Churchtown Station	\$	1,775,951
Direct Labor, Material & Equipment Costs	N. Interconnection Pleasant Valley Station	\$	1,838,080
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Middletown and Cricket Valley Line Upgrade)	\$	3,530,841
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Middletown Substation)	\$	11,239,000
		SUBTOTAL: \$	202,410,780
	CONTRACTOR M	IARK-UP (OH&P) \$	30,361,617
	CONTINGENCY ON	ENTIRE PROJECT \$	-
		TOTAL DIRECT: \$	232,772,397

	NAT - NYPA - T029 - (Segment B) - Indirect Costs		Total Each Segment
Indirect Costs	A. Transmission Line Knickerbocker to Churchtown		\$ 12,932,303
Indirect Costs	B. Transmission Line Churchtown to Pleasant Valley		\$ 20,701,161
Indirect Costs	C. Blue Stores Junction to Blue Stores Substation		\$ 1,001,157
Indirect Costs	D. Rotterdam Substation - Install		\$ 3,969,250
Indirect Costs	E. Greenbush Substation - Removal		\$ 10,754
Indirect Costs	F. Schodack Substation - Install		\$ 531,867
Indirect Costs	G. Schodack Substation - Removal		\$ 23,933
Indirect Costs	H. Churchtown Substation - Install		\$ 3,765,943
Indirect Costs	I. Churchtown Substation - Removal		\$ 153,506
Indirect Costs	J. Pleasant Valley Substation - Install		\$ 727,028
Indirect Costs	K. Interconnection Milan Station		\$ 129,428
Indirect Costs	L. Interconnection Knickerbocker Station		\$ 218,560
Indirect Costs	M. Interconnection Churchtown Station		\$ 329,054
Indirect Costs	N. Interconnection Pleasant Valley Station		\$ 327,187
Indirect Costs	O. System Upgrade Facilities (Middletown and Cricket Valley Line Upgrade)		\$ 882,710
Indirect Costs	P. System Upgrade Facilities (Middletown Substation)		\$ 2,810,000
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitigation)		\$ 7,627,609
		TOTAL INDIRECT:	\$ 56,141,449

TOTAL ESTIMATED COST: \$ 288,913,846

A. Transmission Line Knickerbocker to Churchtown

NAT - NYPA - T029 - (Segment B)

Estimate Revision:

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Total: \$ 66,766,190

NAT - NYPA - T029 - (S	Segment B)					
		Supply	Inst	allation		Total
A. Transmission Line Knickerbocker to Churchtown						
1. CLEARING & ACCESS	\$	11,500	\$	13,264,953	\$	13,276,453
2. FOUNDATIONS	\$	1,222,467	\$	5,948,438	\$	7,170,905
3. STRUCTURES	\$	7,893,794	\$	9,965,095	\$	17,858,889
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	2,367,420	\$	8,759,465	\$	11,126,885
5. INSULATORS, FITTINGS, HARDWARE	\$	2,914,366	\$	1,486,388	\$	4,400,755
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,152,764	\$	11,779,540	\$	12,932,303
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	15,562,311	\$	51,203,879	\$	66,766,190
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	15.562.311	Ś	51.203.879	Ś	66.766.190

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Transm	nission Line Knickerbocker to Churchtown								
1. CLEARING & A	ACCESS								
1.1 C	Clearing the ROW - Heavy (mowing & clearing)	19	Acre	\$ -	\$ -	\$ 15,000	\$ 285,000	\$ 15,000	\$ 285,000
1.2 C	Clearing the ROW - Light (mowing)	63	Acre		\$ -	\$ 5,000	\$ 315,000	\$ 5,000	\$ 315,000
	Permanent Access Road	23,126	LF	\$ -	\$ -	\$ 45.00			
	Silt Fence	115,632	LF	\$ -	\$ -	\$ 4.00	. ,		\$ 462,528
	Matting - Access and ROW	92,506	LF	\$ -	\$ -	\$ 70.00			
	Matting - To Work Area	12,075	LF	\$ -	\$ -	\$ 70.00	· , , , , , , , , , , , , , , , , , , ,		
	Snow Removal	21.9	Mile	\$ -	\$ -	\$ 16,000		\$ 16,000	
	ROW Restoration	21.9	Mile	\$ -	\$ -	\$ 10,000	\$ 219,000	\$ 10,000	\$ 219,000
	Nork Pads	805,000.0	SF	\$ -	\$ -	\$ 3.52	, ,		\$ 2,833,600
	Restoration for Work Pad areas	161,000.0	SF	\$ -	\$ -	\$ 0.15			\$ 24,150
	Temporary Access Bridge	9	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
_	Stabilized Construction Entrance	4	EA	\$ -	\$ -	\$ 4,580			
	Maintenance and Protection of Traffic on Public Roads	47	EA	\$ -	\$ -	\$ 4,130			
	Culverts / Misc. Access	10	EA	\$ 750		<u> </u>	. ,	\$ 2,000	\$ 20,000
	Gates	2	EA	\$ 2,000			· , , , , , , , , , , , , , , , , , , ,	\$ 4,500	\$ 9,000
	Concrete Washout Station	2	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
TOTAL - CLEARIN					\$ 11,500		\$ 13,264,953		\$ 13,276,453
2. FOUNDATION	IS								
2.1 1	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	1	EA	\$ 3,548	\$ 3,548	\$ 24,123	\$ 24,123	\$ 27,671	\$ 27,671
2.2 1	L-CKT 345KV VERTICAL TANGENT (0°-1°)	1	EA	\$ 2,929	\$ 2,929	\$ 19,916	\$ 19,916	\$ 22,844	\$ 22,844
2.3 2	2-CKT 115KV/345KV DELTA SMALL ANGLE (1°-15°)	7	EA	\$ 3,685	\$ 25,795	\$ 25,058	\$ 175,406	\$ 28,743	\$ 201,201
	2-CKT 115KV/345KV DELTA TANGENT (0°-1°)	129	EA	\$ 2,720		· ·		\$ 21,215	
	2-CKT 115KV/345KV DELTA TANGENT (0°-1°) HD	3	EA	\$ 2,878	,	,	,	,	
2.6 2	2-CKT 115KV/345KV DELTA TANGENT DEADEND (0°-5°)	10	EA	\$ 3,193	,	\$ 21,711	\$ 217,107	\$ 24,903	\$ 249,035
2.7 1	L-CKT 345KV VERTICAL LARGE ANGLE DEADEND (60°-90°)	1	EA	\$ 118,078	\$ 118,078		,	\$ 237,421	
2.8 1	L-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	1	EA	\$ 93,345	\$ 93,345	\$ 94,345	\$ 94,345	\$ 187,690	\$ 187,690
2.9 2	2-CKT 115KV/345KV DELTA MEDIUM ANGLE DEADEND (15°-60°)	8	EA	\$ 73,419	\$ 587,351	\$ 74,205	\$ 593,641	\$ 147,624	\$ 1,180,993
2.10 R	Rock Excavation Adder	1,130.0	CY	\$ -	\$ -	\$ 2,000	\$ 2,260,000	\$ 2,000	\$ 2,260,000
2.11									
2.12									

131	Item	Item Description	Estimated Quantity	Unit of Measure	Materi	al Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
2.31 CET SHOWN PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDRESS OF THE PROTECTION AND ADDR	2.13										
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TOTAL - TOMOGRAPHONE 1. I LOT - MASSEV VERTICAL LAKELY ARCHED FOR 1976 (1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY ARCHED FOR 1976 VERTICAL LAKELY	2.17										
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1.5 CETT SERV VERTICAL RAMIAL RAMIEL (F1-17) 1 Structure 5 181,184 5 1.80,84 5 1.80,80 5 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1.80,80 8 1	3.1	1-CKT 345KV VERTICAL LARGE ANGLE DEADEND (60°-90°)	1	Structure	\$	239,760	\$ 239,760	\$ 143,856	\$ 143,856	\$ 383,616	\$ 383,616
1.	3.2	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	1	Structure	\$	116,328	\$ 116,328	\$ 69,797	\$ 69,797	\$ 186,125	\$ 186,125
3.5 CCT INSEQNATION PROTECT AMERICAN PROCESS S. 1.008,109 S. 7.730 S. 500,000 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008,600 S. 2.008	3.3	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	1	Structure	\$	103,156	\$ 103,156	\$ 61,894	\$ 61,894	\$ 165,050	\$ 165,050
2-021 ISEN//JANOV DUILA SAMULA ANGLE (1-2-17)	3.4	1-CKT 345KV VERTICAL TANGENT (0°-1°)	1	Structure	\$	50,024	\$ 50,024	\$ 30,014	\$ 30,014	\$ 80,038	\$ 80,038
3.7 2-CST LEAVY/LEAVE DELTA FAMILIAN PRINCIPLY 120 STRUCTURE S 8,0104/16 S 2,044 S 8,000/4,000 S 2,071 S 8,0774_624 3.8 2-CST LEAVY/LEAVE DELTA FAMILIAN PRINCIPLY S 5,000 S 5,000 S 2,000 S 2,000 3.10 Servicture S 5,000 S 5,000 S 2,000 S 2,000 S 2,000 3.11 Servicture S 5,000 S 2,000 S 2,000 S 2,000 S 2,000 3.12 Install Converding sand Carcustry (Accessories	3.5	2-CKT 115KV/345KV DELTA MEDIUM ANGLE DEADEND (15°-60°)	8	Structure	\$	125,416	\$ 1,003,329	\$ 75,250	\$ 601,997	\$ 200,666	\$ 1,605,326
3.8 ACRT 138N/ASSON DELTA FARGEST (GYST) 10 10 10 10 10 10 10 1	3.6	2-CKT 115KV/345KV DELTA SMALL ANGLE (1°-15°)	7	Structure	\$	73,812	\$ 516,687	\$ 44,287	\$ 310,012	\$ 118,100	\$ 826,698
3	3.7	2-CKT 115KV/345KV DELTA TANGENT (0°-1°)	129	Structure	\$	39,107	\$ 5,044,765	\$ 23,464	\$ 3,026,859	\$ 62,571	\$ 8,071,624
3-2 2-CAT LISOV/JASAN (POTRAT ASSERDIT CARRONIC/S*) 10 STOCKUME 5 57,505 5 53,005 5 3,000 5 2,286,000 5 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000 3 2,286,000	3.8		3		\$				\$ 97,647		\$
Solid Remove Existing Contract Foundation See EA S S S S S S S S S	3.9		10		\$						
3.12 Install Grounding Accessories 161 Pole \$ 5.06 \$ 81,466 \$ 5.39 \$ 80,609 \$ 6,045 \$ 973,145 3.13	3.10	Remove Existing Concrete Foundation	688	EA	\$	-	\$ -	\$ 3,250	\$ 2,236,000	\$ 3,250	\$ 2,236,000
3.31 Install Grounding Accessories 161 Pole \$	3.11	Remove Existing Structure and Accessories	172	EA	\$	-	\$ -	\$ 12,500	\$ 2,150,000	\$ 12,500	\$ 2,150,000
3.13	3.12		161	Pole	\$	506	\$ 81,466	\$ 5,539	\$ 891,699	\$ 6,045	\$ 973,165
3.15	3.13										
TOTAL STRUCTURES	3.14										
## A CONDUCTOR, SHILDOWER, DFGW ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIV* (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIVE (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIVE (1) 954cm 154/7 ACSS* Cardinal** ## 1 ASSIVE (1) 954cm 154/7 ACSS* C	3.15										
## 1	TOTAL - STRUC	CTURES:					\$ 7,893,794		\$ 9,965,095		\$ 17,858,889
## 1	4. CONDUCTO	R, SHIELDWIRE, OPGW							, ,		, ,
4.2 (1) OPCW 36 Fiber Ac-33/38/77 123.631 LF S 1.35 S 165.902 S 5.00 S 618.155 S 5.35 \$788.097 4.3 (1) 1/38° ERST Steel 121.444 LF S 0.47 S 57.065 S S S S 5.00 S 604.135 4.4 Remove Existing 115W Cable From Existing Structures 4.18 Mile S S S S S 30.000 S 1.314.000 S 30.000 S 1.314.000 4.5 Remove Existing OFOW Cable and Accessories 21.9 Mile S S S S 1.200 S 262.800 S 1.200.000 S 262.800 4.6 Remove Existing OFOW and Accessories 21.9 Mile S S S S S S S S S	4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	741,787	LF	\$	1.90	\$ 1,409,395	\$ 5.00	\$ 3,708,935	\$ 6.90	\$ 5,118,330
4.3	4.2		123,631	LF	\$						\$
4.4 Remove Existing 115W Cable From Existing Structures			121,414	LF	\$						
A.5 Remove Existing OPGW Cable and Accessories 21.9 Mille 5 - 5 12,000 5 262,800 5 12,000 0 5 262,800 6 17,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6 12,000 6	4.4			Mile	\$						
4.6 Remove Existing OHSW and Accessories 21.9 Mile S	4.5			Mile	\$	-	\$ -				
4.7 115kV - (1) 954kcmli 54/7 ACSS "Cardinal" 364,241 LF S 1.90 5 622,058 S 5.00 S 1,821,205 S 6.90 S 2,512,628 4.8 Riber Poles - (Rel Catations) 24 Set S 1,750 S 42,000 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 80,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500 S 3,500				Mile	\$	-	\$ -				
4.8 Rider Poles (47 Locations)					\$	1.90	\$ 692,058				
4.9 Rider Poles - Relocated 23 Set \$ - \$ \$ - \$ \$ 3,500 \$ 80,500 \$ 3,500,00 \$ 80,500					Ś						
4.10					\$						
4.11 4.12 4.13 4.14 4.15 4.16 4.17 TOTAL: CONDUCTOR, SHIELDWIRE, OPGW: 5. INSULATOR, FITTINGS, HARDWARE 5.1 345kV Tangent (1-Group of 18-Bells Each Assembly) 5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 6.5 3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5 Assembly 7.5								,	,	,	,
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5. INSULATOR, FITTINGS, HARDWARE S.1 345kV Tangent (1-Group of 18-Bells Each Assembly) 705 Assembly \$ 1,800 \$ 1,269,000 \$ 720 \$ 507,600 \$ 2,520 \$ 1,776,600 5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 695 Assembly 900 \$ 625,500 \$ 560 \$ 389,200 \$ 1,460 \$ 1,014,700 5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 300 Assembly \$ 1,800 \$ 540,000 \$ 720 \$ 216,000 \$ 2,520 \$ 756,000 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 126 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ 900 \$ 28,200 \$ 150 \$ 21,150 \$ 350 \$ 49,350 5.6 OPGW Assembly - Tangent		UCTOR, SHIELDWIRE, OPGW:					\$ 2,367,420		\$ 8,759,465		\$ 11,126,885
5.1 345kV Tangent (1-Group of 18-Bells Each Assembly) 705 Assembly \$ 1,800 \$ 1,269,000 \$ 720 \$ 507,600 \$ 2,520 \$ 1,776,600 5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) 695 Assembly \$ 900 \$ 625,500 \$ 560 \$ 389,200 \$ 1,460 \$ 1,014,700 5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 300 Assembly \$ 1,800 \$ 540,000 \$ 720 \$ 216,000 \$ 2,520 \$ 756,000 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 126 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ 900 \$ 12,800 \$ 150 \$ 21,150 \$ 350 \$ 49,350 5.6 OPGW											
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5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 126 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	695	Assembly	\$	900	\$ 625,500	\$ 560	\$ 389,200	\$ 1,460	\$ 1,014,700
5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 126 Assembly \$ 900 \$ 113,400 \$ 560 \$ 70,560 \$ 1,460 \$ 183,960 5.5 Assembly \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	300	Assembly	\$	1,800	\$ 540,000	\$ 720	\$ 216,000	\$ 2,520	\$ 756,000
5.5 Assembly \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -					\$						
5.7 OPGW Assembly - Angle / DE 40 Assembly \$ 250 \$ 10,000 \$ 150 \$ 6,000 \$ 400 \$ 16,000 5.8 OHSW Assembly - Tangent 139 Assembly \$ 200 \$ 27,800 \$ 150 \$ 20,850 \$ 350 \$ 48,650 5.9 OHSW Assembly - Angle / DE 36 Assembly \$ 250 \$ 9,000 \$ 150 \$ 5,400 \$ 400 \$ 14,400											
5.7 OPGW Assembly - Angle / DE 40 Assembly \$ 250 \$ 10,000 \$ 150 \$ 6,000 \$ 400 \$ 16,000 5.8 OHSW Assembly - Tangent 139 Assembly \$ 200 \$ 27,800 \$ 150 \$ 20,850 \$ 350 \$ 48,650 5.9 OHSW Assembly - Angle / DE 36 Assembly \$ 250 \$ 9,000 \$ 150 \$ 5,400 \$ 400 \$ 14,400	5.6	OPGW Assembly - Tangent	141	Assembly	\$	200	\$ 28,200	\$ 150	\$ 21,150	\$ 350	\$ 49,350
5.8 OHSW Assembly - Tangent 139 Assembly \$ 200 \$ 27,800 \$ 150 \$ 20,850 \$ 350 \$ 48,650 5.9 OHSW Assembly - Angle / DE 36 Assembly \$ 250 \$ 9,000 \$ 150 \$ 5,400 \$ 400 \$ 14,400					\$						
5.9 OHSW Assembly - Angle / DE 36 Assembly \$ 250 \$ 9,000 \$ 150 \$ 5,400 \$ 14,400			139		\$						48,650
	5.9		36	Assembly	\$						14,400
									·		

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e Mat	terial Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
5.11	OPGW Splice & Test	8	EA	\$ 2,520) \$	20,160	\$ 2,520	\$ 20,160	\$ 5,040	\$	40,320
5.12	Spacer - Conductor	3,651	EA	\$ 50) \$	182,550	\$ 35	\$ 127,785	\$ 85	\$	310,335
5.13	Vibration Dampers - Conductor	1,314	EA	\$ 35	5 \$	45,990	\$ 35	\$ 45,990	\$ 70	\$	91,980
5.14	Shield wire / OPGW Dampers, Misc. Fittings	442	EA	\$ 27		11,934	\$ 35	\$ 15,470	\$ 62	\$	27,404
5.15						,		,			
5.16		-	Set		\$	-		\$ -	\$ -	\$	-
5.17		-	Set		\$	-		\$ -	\$ -	\$	-
5.18											
5.19	Guys, Anchors, and Accessories	-	EA	\$ 720) \$	-	\$ 885	\$ -	\$ 1,605	\$	_
5.20	Misc. materials (Signs and Markers)	21.9	Mile	\$ 770		16,863	\$ 1,006	\$ 22,031	\$ 1,776	-	38,894
5.21		-		\$ -	Ś	-	\$ -	\$ -	\$ -	Ś	-
5.22				i i	ľ					<u> </u>	
5.23											
TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:				Ś	2,914,366		\$ 1.486.388		Ś	4,400,755
A. Trans	mission Line Knickerbocker to Churchtown				\$	14,409,547		\$ 39,424,340		\$	53,833,887
	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				1					·	
6. IVIOB/DEIVIO	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$ -	Ś	-	\$ 538,339	\$ 538,339	\$ 538,339	Ś	538,339
0.1	Project Management, Material Handling & Amenities	1	LS	3 -	->	-	\$ 556,559	\$ 556,559	\$ 556,559	+-	330,339
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 3,322,654	\$ 3,322,654	\$ 3,322,654	\$	3,322,654
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 538,339	\$ 538,339	\$ 538,339	\$	538,339
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 538,339	\$ 538,339	\$ 538,339	\$	538,339
	Engineering										
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 2,691,694	\$ 2,691,694	\$ 2,691,694	\$	2,691,694
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 161,502	\$ 161,502	\$ 161,502	\$	161,502
6.7	Geotech	25	Location	\$ -	\$	-	\$ 3,500	\$ 87,500	\$ 3,500	\$	87,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 376,837	\$ 376,837	\$ 376,837	\$	376,837
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 161,502	\$ 161,502	\$ 161,502	\$	161,502
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ 3,269,000	\$ 3,269,000	\$ 3,269,000	\$	3,269,000
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.17	, ,	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	_
6.18	Sales Tax on Materials	1	LS	\$ 1,152,764	1 \$	1,152,764	\$ -	\$ -	\$ 1,152,764	<u> </u>	1,152,764
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS	, , , , , ,	\$	-	\$ 53,834	\$ 53,834	\$ 53,834	\$	53,834
	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	_	-		Ś	1,152,764	,	\$ 11,779,540		Ġ	12,932,303

NAT - NYPA - T029 - (Segment B) B. Transmission Line Churchtown to Pleasant Valley

Estimate Revision: 5 Total: \$ 108,274,536

NAT - NYPA - T029 - (S	egment	В)		
		Supply	Installation	Total
B. Transmission Line Churchtown to Pleasant Valley				
1. CLEARING & ACCESS	\$	14,000	\$ 19,263,286	\$ 19,277,286
2. FOUNDATIONS	\$	832,267	\$ 8,602,686	\$ 9,434,954
3. STRUCTURES	\$	11,844,213	\$ 21,669,343	\$ 33,513,556
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	3,505,234	\$ 14,965,085	\$ 18,470,319
5. INSULATORS, FITTINGS, HARDWARE	\$	4,562,919	\$ 2,314,342	\$ 6,877,261
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,660,691	\$ 19,040,470	\$ 20,701,161
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	22,419,324	\$ 85,855,212	\$ 108,274,536
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	22,419,324	\$ 85,855,212	\$ 108,274,536

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Mater	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
B. Transi	mission Line Churchtown to Pleasant Valley										
1. CLEARING 8	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	9.0	Acre	\$	-	\$ -	\$ 15,000	\$ 135,000	\$ 15,000	\$	135,000
1.2	Clearing the ROW - Light (mowing)	107.0	Acre	\$	-	\$ -	\$ 5,000	\$ 535,000	\$ 5,000	\$	535,000
1.3	Access Road	34,108.8	LF	\$	-	\$ -	\$ 45			-	1,534,896
1.4	Silt Fence	170,544.0	LF	\$	-	\$ -	\$ 4				682,176
1.5	Matting - Access and ROW	136,435.2	LF	\$	-	\$ -	\$ 70				9,550,464
1.6	Matting - To Work Area	18,300.0	LF	\$	-	\$ -	\$ 70				1,281,000
1.7	Snow Removal	32.3	Mile	\$	-	\$ -	\$ 16,000				516,800
1.8	ROW Restoration	32.3	Mile	\$	-	\$ -	\$ 10,000				323,000
1.9	Work Pads	1,220,000.0	SF SF	\$	-	\$ - \$ -	\$ 4 \$ 0.2	\$ 4,294,400 \$ 36,600		\$	4,294,400 36,600
1.10	Restoration for Work Pad areas	244,000.0	SF EA	\$	-	\$ - \$ -	\$ 0.2				280,490
1.11	Temporary Access Bridge Air Bridge	14	EA	Ś	-	\$ -	\$ 20,033		\$ 20,033	Ś	280,490
1.12	Stabilized Construction Entrance	12	EA	\$	-	\$ -	\$ 14,445				54,960
1.14	Maintenance and Protection of Traffic on Public Roads	- 12	LS	Ś		\$ -	\$ 300,000		\$ 300,000		-
1.15	Gates	4	EA EA	\$	2,000		\$ 2,500				18,000
1.16	Culverts / Misc. Access	8	EA	\$	750						16,000
1.17	Concrete Washout Station	10	EA	\$		\$ -	\$ 1,850				18,500
	ING & ACCESS:	10		Ť		\$ 14,000	Ψ 1,050	\$ 19,263,286	Ţ 1,050	Ś	19,277,286
2. FOUNDATIO	ONS					,					
2.1	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	1	EA	\$	3,548	\$ 3,548	\$ 21,427	\$ 21,427	\$ 24,974	\$	24,974
2.2	1-CKT 345KV VERTICAL TANGENT (0°-1°)	1	EA	\$	2,063	\$ 2,063	\$ 12,458	\$ 12,458	\$ 14,520	\$	14,520
2.3	2-CKT 115KV/345KV DELTA SMALL ANGLE (1°-15°)	14	EA	\$	3,120	\$ 43,684	\$ 18,846	\$ 263,850	\$ 21,967	\$	307,534
2.4	2-CKT 115KV/345KV DELTA TANGENT (0°-1°)	187	EA	\$	1,943	\$ 363,309	\$ 11,735	\$ 2,194,384	\$ 13,678	\$	2,557,693
2.5	2-CKT 115KV/345KV DELTA TANGENT (0°-1°) HD	4	EA	\$	2,073	\$ 8,291	\$ 12,520	\$ 50,079	\$ 14,593	\$	58,370
2.6	2-CKT 115KV/345KV DELTA TANGENT DEADEND (0°-5°)	29	EA	\$	2,171	\$ 62,973	\$ 13,116	\$ 380,357	\$ 15,287	\$	443,330
2.7	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	1	EA	\$	32,046	\$ 32,046	\$ 32,390	\$ 32,390	\$ 64,436	\$	64,436
2.8	2-CKT 115KV/345KV DELTA MEDIUM ANGLE DEADEND (15°-60°)	7	EA	\$	45,194	\$ 316,355	\$ 45,678	\$ 319,743	\$ 90,871	\$	636,097
2.9	Rock Excavation Adder	2,664.0	СУ	\$	-	\$ -	\$ 2,000	\$ 5,328,000	\$ 2,000	\$	5,328,000
2.10											

Item	item Description	Estimated Quantity	Unit of Measure	M	aterial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.11											
2.12											
TOTAL - FOUN						\$ 832,267		\$ 8,602,686		\$	9,434,954
3. STRUCTURE		1	Chrustura	\$	102.156	ć 102.1F6	ć 61.904	ć 61.904	ć 16F.0F0		165.050
3.1	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	1	Structure		103,156		\$ 61,894	\$ 61,894		\$	165,050
3.2	1-CKT 345KV VERTICAL TANGENT (0°-1°)	1	Structure	\$	73,094	\$ 73,094	\$ 43,856	\$ 43,856		\$	116,950
3.3	2-CKT 115KV/345KV DELTA SMALL ANGLE (1°-15°)	14	Structure	\$	78,909		\$ 47,345			\$	1,767,564
3.4	2-CKT 115KV/345KV DELTA TANGENT (0°-1°)	187	Structure	\$	39,764	\$ 7,435,835	\$ 23,858	\$ 4,461,501	\$ 63,622	\$	11,897,335
3.5	2-CKT 115KV/345KV DELTA TANGENT (0°-1°) HD	4	Structure	\$	51,227		\$ 30,736	\$ 122,944		\$	327,850
3.6	2-CKT 115KV/345KV DELTA TANGENT DEADEND (0°-5°)	29	Structure	\$	59,830		\$ 35,898	\$ 1,041,036		\$	2,776,095
3.7	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	1	Structure	\$	127,558	\$ 127,558	\$ 76,535	\$ 76,535		\$	204,092
3.8	2-CKT 115KV/345KV DELTA MEDIUM ANGLE DEADEND (15°-60°)	7	Structure	\$	133,774	\$ 936,415	\$ 80,264	\$ 561,849	\$ 214,038	\$	1,498,263
3.9	Remove Existing Structure and Accessories	2,084	EA	\$	-	\$ -	\$ 3,250	\$ 6,773,000	\$ 3,250	\$	6,773,000
3.10	Install Grounding and Grounding Accessories	521	EA	\$	-	\$ -	\$ 12,500	\$ 6,512,500	\$ 12,500	\$	6,512,500
3.11	Install Grounding and Grounding Accessories	244	Pole	\$	506	\$ 123,464	\$ 5,539	\$ 1,351,394	\$ 6,045	\$	1,474,858
3.12											
3.13											
3.14											
3.15											
3.16											
3.17	TURES PRINCTOWN TO NEW SCOTLAND:										
	R, SHIELDWIRE, OPGW					\$ 11,844,213		\$ 21,669,343		\$	33,513,556
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	1,087,733	LF	Ś	1.90	\$ 2,066,693	\$ 5.00	\$ 5,438,665	\$ 6.90	Ś	7,505,358
4.2	(1) OPGW 36 Fiber AC-33/38/571	181,289	LF	\$	1.35					\$	1,151,185
4.3	(1) 3/8" EHS7 Steel	181,289	LF	\$	0.47	\$ 85,206	\$ 5.00	\$ 906,445	\$ 5.47	\$	991,651
4.5	Remove Existing 115kV Cable From Existing Structures	130.4	Mile	\$	-	\$ -	\$ 30,000	\$ 3,912,000	\$ 30,000.00	\$	3,912,000
4.6	Remove Existing OPGW Cable and Accessories	32.6	Mile	\$	-	\$ -	\$ 12,000	\$ 390,600		\$	390,600
4.7	Remove Existing OHSW and Accessories	32.6	Mile	\$	-	\$ -	\$ 12,000	\$ 390,600		\$	390,600
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	543,866	LF	\$	1.90	\$ 1,033,345	\$ 5.00	\$ 2,719,330	\$ 6.90	\$	3,752,675
4.9											
4.10	Rider Poles - Relocated	43	Set	\$	-	\$ -	\$ 3,500			\$	150,500
4.11	Rider Poles (86 Total)	43	EA	\$	1,750		\$ 3,500	\$ 150,500	\$ 5,250.00	\$	225,750
	JCTOR, SHIELDWIRE, OPGW: FITTINGS, HARDWARE					\$ 3,505,234		\$ 14,965,085		\$	18,470,319
5.1 Solator,	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,035	Assembly	\$	1,800	\$ 1,863,000	\$ 720	\$ 745,200	\$ 2,520	\$	2,608,200
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	1,025	Assembly	\$	900	\$ 922,500				\$	1,496,500
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	555	Assembly	\$	1,800	\$ 999,000	\$ 720	\$ 399,600		\$	1,398,600
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	252	Assembly	\$	900	\$ 226,800	\$ 560	\$ 141,120		\$	367,920
5.5	**		Assembly	1		\$ -		\$ -	\$ -	\$	-
5.6	OPGW Assembly - Tangent	207	Assembly	\$	200	\$ 41,400	\$ 150	\$ 31,050	\$ 350	\$	72,450
5.7	OPGW Assembly - Angle / DE	74	Assembly	\$	250	\$ 18,500	\$ 150	\$ 11,100	\$ 400	\$	29,600
5.8	OHSW Assembly - Tangent	205	Assembly	\$	200	\$ 41,000	\$ 150	\$ 30,750	\$ 350	\$	71,750
5.9	OHSW Assembly - Angle / DE	72	Assembly	\$	250	\$ 18,000	\$ 150	\$ 10,800	\$ 400	\$	28,800
5.10	OPGW Splice Boxes	12	Set	\$	1,746	\$ 20,954	\$ 2,274	\$ 27,288	,	\$	48,242
5.11	OPGW Splice & Test	12	EA	\$	2,520						60,480
	Spacer - Conductor	5,414	EA	\$	50						460,190
5.13	Vibration Dampers - Conductor	1,949	EA	\$	35						136,430
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	657	EA	\$	27		\$ 35				40,734
5.15	Guys, Anchors, and Accessories		EA	\$	720		\$ 885		\$ 1,605	\$	-
5.16	Misc. materials (Signs and Markers) ATORS, FITTINGS, HARDWARE:	32.3	Mile	\$	770		\$ 1,006	\$ 32,494 \$ 2,314,342	\$ 1,776		57,365
						\$ 4,562,919		, , , , ,		\$	6,877,261
B. Transi	mission Line Churchtown to Pleasant Valley					\$ 20,758,633		\$ 66,814,743		\$	87,573,376

Item	ltem Description	Estimated Quantity	Unit of Measure	Materia	l Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS									
	Contractor Mobilization / Demobilization									
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 875,734	\$ 875,734	\$ 875,734	\$ 875,734
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 5,405,073	\$ 5,405,073	\$ 5,405,073	\$ 5,405,073
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 875,734	\$ 875,734	\$ 875,734	\$ 875,734
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 875,734	\$ 875,734	\$ 875,734	\$ 875,734
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 4,378,669	\$ 4,378,669	\$ 4,378,669	\$ 4,378,669
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 262,720	\$ 262,720	\$ 262,720	\$ 262,720
6.7	Geotech	33	Location	\$	-	\$ -	\$ 3,500	\$ 115,500	\$ 3,500	\$ 115,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 613,014	\$ 613,014	\$ 613,014	\$ 613,014
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 262,720	\$ 262,720	\$ 262,720	\$ 262,720
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ 5,248,000	\$ 5,248,000	\$ 5,248,000	\$ 5,248,000
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$	1,660,691	\$ 1,660,691	. \$ -	\$ -	\$ 1,660,691	\$ 1,660,691
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 87,573	\$ 87,573	\$ 87,573	\$ 87,573
TOTAL - MOE	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,660,691		\$ 19,040,470		\$ 20,701,161

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NG & NY Transco - T019 - (Segment B)

C. Blue Stores Junction to Blue Stores Substation

Estimate Revision: 5 Total: \$ 5,747,517

NG & NY Transco - T019 - (Segme	nt B)			
		Supply	Installation	Total
C. Blue Stores Junction to Blue Stores Substation				
1. CLEARING & ACCESS	\$	-	\$ 1,404,512	\$ 1,404,512
2. FOUNDATIONS	\$	236,848	\$ 925,954	\$ 1,162,802
3. STRUCTURES	\$	596,484	\$ 946,665	\$ 1,543,149
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	84,763	\$ 387,095	\$ 471,858
5. INSULATORS, FITTINGS, HARDWARE	\$	107,544	\$ 56,496	\$ 164,040
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	82,051	\$ 919,106	\$ 1,001,157
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,107,690	\$ 4,639,828	\$ 5,747,517
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,107,690	\$ 4,639,828	\$ 5,747,517

Description	of Work:								
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Blue	Stores Junction to Blue Stores Substation								
1. CLEARING	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	4.0	Acre	\$ -	\$ -	\$ 5,000		\$ 5,000	
1.3	Access Road	2,218	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	11,088.0	LF	\$ -	\$ -		\$ 44,352		\$ 44,352
1.5	Matting - Access and ROW	8,870	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	1,800.0	LF	\$ -	\$ -	\$ 70			\$ 126,000
1.7	Snow Removal	2.1	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	2.1	Mile	\$ -	\$ -	\$ 10,000	\$ 21,000	\$ 10,000	\$ 21,000
1.9	Work Pads	120,000.0	SF	\$ -	\$ -	\$ 4	\$ 422,400		\$ 422,400
1.10	Restoration for Work Pad areas	24,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 3,600	\$ 0	\$ 3,600
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	1	EA	\$ -	\$ -	\$ 4,580	\$ 4,580	\$ 4,580	\$ 4,580
1.14	Maintenance and Protection of Traffic on Public Roads	2	EA	\$ -	\$ -	\$ 4,130	\$ 8,260	\$ 4,130	\$ 8,260
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	-	EA	\$ -	\$ -	\$ 1,850	\$ -	\$ 1,850	\$ -
TOTAL - CLEA	RING & ACCESS:				\$ -		\$ 1,404,512		\$ 1,404,512
2. FOUNDATI	ons								
2.1	Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE	6	EA	\$ 31,225	\$ 187,348	\$ 31,559	\$ 189,354	\$ 62,784	\$ 376,702
2.2	Direct Embed - 115kV Single Circuit H- Pole Tangent	18	EA	\$ 2,750	\$ 49,500	\$ 18,700	\$ 336,600	\$ 21,450	\$ 386,100
2.3	Rock Excavation Adder	200.0	CY	\$ -	\$ -	\$ 2,000	\$ 400,000	\$ 2,000	\$ 400,000
2.4						,	,	,	
2.5									
2.6									
2.7									
2.8									
2.9									
2.10									
2.11									
2.12									
2.13									1

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.14									
2.15									
TOTAL - FOUN					\$ 236,848		\$ 925,954		\$ 1,162,802
3. STRUCTURE			<u> </u>	4 20.022	4 222.222	d 22.002	4 42 250	A 60.744	4 202 207
3.1	115kV Single Circuit H- Pole Angle/ DE	6	Structure	\$ 39,822		\$ 23,893	\$ 143,358		\$ 382,287
3.2	115kV Single Circuit H- Pole Tangent	18	Structure	\$ 18,515		\$ 11,109 \$ 7,500			
3.3	Remove Existing Structure and Accessories	27	EA	\$ - \$ -	\$ - \$ -	7,500	\$ -	7,500	\$ - \$ 337,500
3.5	Install Grounding and Grounding Accessories	21	EA	\$ -	3 -	\$ 12,500	\$ 337,500	\$ 12,500	\$ 337,500
3.5	Install Crounding and Crounding Assessation	48	Dala	\$ 506	\$ 24,288	\$ 5,539	\$ 265,848	\$ 6,045	\$ 290,136
3.7	Install Grounding and Grounding Accessories	46	Pole	\$ 500	\$ 24,288	\$ 5,559	\$ 205,648	\$ 0,045	\$ 290,136
3.8									
3.9									
3.10									
3.11									
3.12									
3.13									
3.14									
3.15									
TOTAL - STRUC	TURES:				\$ 596,484		\$ 946,665		\$ 1,543,149
	R, SHIELDWIRE, OPGW						. 5.0,305		2,5 .5,245
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ -	\$ -	\$ 5.00	\$ -	\$ 5.00	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ -		\$ 5.00		\$ 5.00	
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ -	\$ -	\$ 5.00		\$ 5.00	
4.4	115kV - (1) 795kcmil 26/7 ACSR "Drake"	34,927.0	LF	\$ 1.72		\$ 5.00			
4.5	(1) OPGW 36 Fiber AC-33/38/571	11,642.0	LF	\$ 1.35	\$ 15,717	\$ 5.00	\$ 58,210	\$ 6.35	\$ 73,927
4.6	(1) 3/8" EHS7 Steel	11,642.0	LF	\$ 0.47		\$ 5.00			
4.7	Remove Existing Cable	2.1	Mile	\$ -			\$ 63,600		
4.8	Remove Existing OPGW Cable and Accessories	-	Mile	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$ -
4.9	Remove Existing OHSW and Accessories	2.1	Mile	\$ -	\$ -	\$ 12,000	\$ 25,440		\$ 25,440
4.10		-							
4.11		-							
4.12	Rider Poles (Locations)	2.0	EA	\$ 1,750	\$ 3,500	\$ 3,500	\$ 7,000	\$ 5,250.00	\$ 10,500
4.13				7 -7.00	7	7 2,000	7 .,	7 0,20000	
	L DUCTOR, SHIELDWIRE, OPGW:				\$ 84,763		\$ 387,095		\$ 471,858
	, FITTINGS, HARDWARE				\$ 64,703		\$ 367,033		3 4/1,030
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
5.1	345KV Tangent (1-Group of 16-Bells Each Assembly)	-	Assembly	\$ 1,000	3 -	\$ 720	ş -	\$ 2,520	-
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	54	Assembly	\$ 900	\$ 48,600	\$ 360	\$ 19,440	\$ 1,260	\$ 68,040
	2451412 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1			4 4 000		4 700		A 2.520	_
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800		\$ 720	\$ -	\$ 2,520	\$ -
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	36	Assembly	\$ 900	\$ 32,400	\$ 360	\$ 12,960	\$ 1,260	\$ 45,360
5.5			Assembly		\$ -		\$ -	\$ -	\$ -
5.6	OPGW Assembly - Tangent	18	Assembly	\$ 200	\$ 3,600	\$ 150	\$ 2,700	\$ 350	\$ 6,300
5.7	OPGW Assembly - Angle / DE	12	Assembly	\$ 250		\$ 150	·		\$ 4,800
5.8	OHSW Assembly - Tangert	18	Assembly	\$ 200			\$ 2,700		\$ 6,300
		12							
5.9	OHSW Assembly - Angle / DE		Assembly	\$ 250			7 -,		, , , , , , , , , , , , , , , , , , , ,
5.10	OPGW Splice Boxes	2	Set	\$ 1,746	\$ 3,492	\$ 2,274	\$ 4,548	\$ 4,020	\$ 8,040
5.11	OPGW Splice & Test	2	EA	\$ 2,520	\$ 5,040	\$ 2,520	\$ 5,040	\$ 5,040	\$ 10,080
5.12	Spacer - Conductor	-	EA	\$ 50	\$ -	\$ 35	\$ -	\$ 85	\$ -
5.13	Vibration Dampers - Conductor	72	EA	\$ 35	\$ 2,520	\$ 35	\$ 2,520	\$ 70	\$ 5,040
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	25	EA	\$ 27		\$ 35		\$ 62	
5.15	Guys, Anchors, and Accessories	-	EA	\$ 720				\$ 1,605	
5.16	Misc. materials (Signs and Markers)	2.1	Mile	\$ 770		\$ 1,006			
5.17	·				,	,	,	,	
TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:				\$ 107,544		\$ 56,496		\$ 164,040
C. Blue S	Stores Junction to Blue Stores Substation				\$ 1,025,639		\$ 3,720,722		\$ 4,746,361
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Project Management, Material Handling & Amenities				1				· · · · · · · · · · · · · · · · · · ·

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 292,948	\$ 292,948	\$ 292,948	\$ 292,948
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 237,318	\$ 237,318	\$ 237,318	\$ 237,318
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.7	Geotech	2	Location	\$ -	\$ -	\$ 3,500	\$ 7,000	\$ 3,500	\$ 7,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 33,225	\$ 33,225	\$ 33,225	\$ 33,225
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 153,000	\$ 153,000	\$ 153,000	\$ 153,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 82,051	\$ 82,051	\$ -	\$ -	\$ 82,051	\$ 82,051
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 4,746	\$ 4,746	\$ 4,746	\$ 4,746
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 82,051		\$ 919,106		\$ 1,001,157

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NAT - NYPA - T029 - (Segment B) D. Knickerbocker 345kV Substation - Install

Estimate Revision: 5 Total: \$ 18,951,250

NAT - NYPA - T029 - (Se	gment B)		
	Supply	Installation	Total
D. Knickerbocker 345kV Substation - Install			
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ 277,200	\$ 1,745,500	\$ 2,022,700
2. SUBSTATION FOUNDATIONS	\$ 1,467,421	\$ 1,581,150	\$ 3,048,571
3. SUBSTATION STRUCTURES	\$ 710,400	\$ 710,400	\$ 1,420,800
4. MAJOR EQUIPTMENT	\$ 600,000	\$ 240,000	\$ 840,000
5. SMALL EQUIPTMENT / MATERIALS	\$ 1,191,500	\$ 542,000	\$ 1,733,500
6. CONTROL HOUSE / PANELS	\$ 1,678,925	\$ 1,232,275	\$ 2,911,200
7. MISC ITEMS	\$ 1,114,327	\$ 1,890,902	\$ 3,005,229
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ 563,182	\$ 3,406,069	\$ 3,969,250
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ 7,602,955	\$ 11,348,296	\$ 18,951,250
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ 7,602,955	\$ 11,348,296	\$ 18,951,250

Description of Work:	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Knicke	erbocker 345kV Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	4.75	ACRES	\$ -	\$ -	\$ 230,000	\$ 1,092,500	\$ 230,000	\$ 1,092,500
1.2	Station stone within substation fence.	2,100	CY	\$ 27	\$ 56,700	\$ 75	\$ 157,500	\$ 102	\$ 214,200
1.3	Substation Fence	1,820	LF	\$ 100	\$ 182,000	\$ 100	\$ 182,000	\$ 200	\$ 364,000
1.4									
1.5									
1.6	Permanent Access Road - 20'-Wide	1,100	LF	\$ 35	\$ 38,500	\$ 285	\$ 313,500	\$ 320	\$ 352,000
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ 277,200		\$ 1,745,500		\$ 2,022,700
2. SUBSTATION	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	3	EA	\$ 14,940	\$ 44,820	\$ 16,000	\$ 48,000	\$ 30,940	\$ 92,820
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 26,145	\$ 104,580	\$ 28,000	\$ 112,000	\$ 54,145	\$ 216,580
2.1d	Caisson DE Foundations (for DE A frame str shared column)	6	EA	\$ 26,145	\$ 156,870	\$ 28,000	\$ 168,000	\$ 54,145	\$ 324,870
2.1e	Switch Stand Foundations	96	EA	\$ 4,482	\$ 430,272	\$ 4,800	\$ 460,800	\$ 9,282	\$ 891,072
2.1f	Station Service Transformer Stand Foundation	4	EA	\$ 4,482	\$ 17,928	\$ 4,800	\$ 19,200	\$ 9,282	\$ 37,128
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	63	EA	\$ 4,482	\$ 282,366	\$ 4,800	\$ 302,400	\$ 9,282	\$ 584,766
2.1j	Instrument Transformer Stand Foundations	27	EA	\$ 4,482	\$ 121,014	\$ 4,800	\$ 129,600	\$ 9,282	\$ 250,614
2.1k	Arrester Stand Foundations	9	EA	\$ 4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1m	Wave Trap Stand Foundations	3	EA	\$ 4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1n	Reactor Foundations	0	EA	\$ 7,470	\$ -	\$ 8,000	\$ -	\$ 15,470	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1p									
2.1q									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$ 16,434	\$ 131,472	\$ 17,600	\$ 140,800	\$ 34,034	\$ 272,272
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3j	Instrument Transformer Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3k	Arrester Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 33,615	\$ 33,615	\$ 36,000	\$ 36,000	\$ 69,615	\$ 69,615
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
2.5c	Station Service Distribution Line - 3ph.	1	LS	\$ -	\$ -	\$ 9,750	\$ 9,750	\$ 9,750	\$ 9,750
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	4	EA	\$ 5,229	\$ 20,916	\$ 5,600	\$ 22,400	\$ 10,829	\$ 43,316
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ 1,467,421		\$ 1,581,150		\$ 3,048,571
	N STRUCTURES								
3.1	345kV								

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rat	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1a	Substation A-Frame Structures - Stand alone	1	EA	\$ 37,00	37,000	\$ 37,000	\$ 37,000	\$ 74,000	\$ 74,000
3.1b	Substation A-Frame Structures - Shared Column	2	EA	\$ 37,00	0 \$ 74,000	\$ 37,000	\$ 74,000	\$ 74,000	\$ 148,000
3.1c	Switch Stands	16	EA	\$ 14,80	3 \$ 236,800	\$ 14,800	\$ 236,800	\$ 29,600	\$ 473,600
3.1d	Station Service Transformer Stand	1	EA	\$ 14,80	0 \$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$ 29,600
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	63	EA	\$ 3,70	3 \$ 233,100	\$ 3,700	\$ 233,100	\$ 7,400	\$ 466,200
3.1g	Instrument Transformer Stand	27	EA	\$ 1,85	9,950	\$ 1,850	\$ 49,950	\$ 3,700	\$ 99,900
3.1h	Arrester Stand	9	EA	\$ 1,85) \$ 16,650	\$ 1,850	\$ 16,650	\$ 3,700	\$ 33,300
3.1j	Wave Trap Stand	3	EA	\$ 7,40	22,200	\$ 7,400	\$ 22,200	\$ 14,800	\$ 44,400
3.1k	Misc. Structures	4	EA	\$ 6,47	5 \$ 25,900	\$ 6,475	\$ 25,900	\$ 12,950	\$ 51,800
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,30) \$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,30	0 \$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2c	Switch Stands	0	EA	\$ 12,02	5 \$ -	\$ 12,025		\$ 24,050	\$ -
3.2d	Station Service Transformer Stand	0	EA	\$ 12,02	5 \$ -	\$ 12,025	\$ -	\$ 24,050	\$ -
3.2e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2f	Bus Support 1 Ph	0	EA	\$ 2,77	5 \$ -	\$ 2,775	\$ -	\$ 5,550	\$ -
3.2g	Instrument Transformer Stand	0	EA	\$ 1,29	5 \$ -	\$ 1,295	\$ -	\$ 2,590	\$ -
3.2h	Arrester Stand	0	EA	\$ 1,29	5 \$ -	\$ 1,295	\$ -	\$ 2,590	\$ -
3.2j	Wave Trap Stand	0	EA	\$ 5,55	o \$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
3.2k	Misc. Structures	0	EA	\$ 6,47		\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,50	o \$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,50	o \$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7,95		\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7,95	5 \$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,33	+	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,85		\$ 1,850			\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ 74	_	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$ 74		\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,70	0 \$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,47	5 \$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
		-						,	
TOTAL - SUBS	TATION STRUCTURES				\$ 710,400		\$ 710,400		\$ 1,420,800
4. MAJOR EQU					710,100		710,100		2,120,000
4.1	345kV								
4.1a	Circuit Breakers	3	EA	\$ 200,00	5 \$ 600,000	\$ 80,000	\$ 240,000	\$ 280,000	\$ 840,000
4.1b	Capacitor Banks with Reactors	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA			\$ 750,000	\$ -	\$ 750,000	\$ -
4.1e		-				,,,,,,			
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ 115,00	o \$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -		\$ 80,000		\$ 80,000	
		-				1,111		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	115kV								
4.3									
4.3 4.3a	Circuit Breakers	0	EA	\$ 52,00	o \$ -	\$ 60,000	\$ -	\$ 112,000	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
TOTAL BANK	OR FOUNDTMENT				\$ 600,000		\$ 340,000		<u> </u>	040.000
	DR EQUIPTMENT				\$ 600,000		\$ 240,000		\$	840,000
	JIPTMENT / MATERIALS 345kV									
5.1		2	F.A.	\$ 40,000	\$ 120,000	\$ 15.000	\$ 45,000	\$ 55.000		165.000
5.1a 5.1b	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	3 9	EA EA	\$ 40,000 \$ 35,000	\$ 120,000 \$ 315,000	\$ 15,000 \$ 17,500	\$ 45,000 \$ 157,500	\$ 55,000 \$ 52,500	\$	165,000 472,500
	VT'S	9	EA					,	· .	
5.1c 5.1d	CT'S	9	EA	\$ 25,000 \$ 13,000	\$ 225,000 \$ 117,000		\$ 108,000 \$ 72,000	\$ 37,000 \$ 21,000	\$	333,000 189,000
		9	EA	\$ 13,000	\$ 117,000		\$ 72,000	\$ 21,000	Ś	
5.1e	CCVT'S	9		7,			· · · · · · · · · · · · · · · · · · ·	,		189,000
5.1f	Arresters	3	EA EA	,	\$ 58,500	\$ 1,500	\$ 13,500 \$ 24,000	,	\$	72,000
5.1g	Wave Traps			,	\$ 39,000	\$ 8,000	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	· .	63,000
5.1h 5.1j	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$	250,000
5.1,										
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$	-
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$	-
5.2c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$	-
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$	-
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
5.2j										
	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s									
5.3	115kV		F.A.	ć 22.000	Ć.	ć 45.000	ć	¢ 40,000		
5.3a	Line Switches - 3ph w/ motor operator	0	EA EA	\$ 33,000 \$ 28,000	\$ - \$ -	\$ 15,000 \$ 17,500	\$ -	\$ 48,000 \$ 45,500	\$	-
5.3b	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA	\$ 28,000 \$ 13,000	\$ - \$ -	-	\$ - \$ -	\$ 43,300	<u> </u>	-
5.3c 5.3d	CT'S	0	EA	\$ 13,000	\$ - \$ -	\$ 8,000 \$ 8,000	\$ - \$ -	\$ 21,000	Ś	
5.3e	CCVT'S	0	EA	\$ 13,000	\$ - \$ -	\$ 8,000	\$ -	\$ 21,000	, ,	
5.3f		0	EA	\$ 3,420	\$ -		\$ -	,	\$	
5.3g	Arresters Wave Traps	0	EA	\$ 3,420	\$ - \$ -	\$ 6,000	\$ -	\$ 9,420 \$ -	\$	-
5.3h		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	Ś	-
5.3j	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
5.3]	Fuses	0	EA	, -	- -	ş -	-	÷ -	,	
TOTAL - SMAL	LL EQUIPTMENT / MATERIALS				\$ 1,191,500		\$ 542,000		\$	1,733,500
	HOUSE / PANELS / GENERATOR				7 2,222,232		7 0.2,000		7	2): 30):33
6.1	CONTROL HOUSE	1	EA	\$ 286,650	\$ 286,650	\$ 85,000	\$ 85,000	\$ 371,650	\$	371,650
6.2	Protection and Telecom Equipment Panels	15	EA	\$ 35,000	\$ 525,000	\$ 10,000	\$ 150,000	\$ 45,000	\$	675,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$	200,000
6.4	Control Cables	1	LS	\$ 352,275	\$ 352,275	\$ 352,275	\$ 352,275	\$ 704,550	\$	704,550
6.5	SCADA and Communications	1	EA	\$ 50,000	\$ 50,000			\$ 150,000		150,000
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
		1		1			4 7.500	45.000	<u>,</u>	15,000
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	>	13,000
	Fire Alarm Generator	1	EA EA	\$ 7,500 \$ 100,000	\$ 7,500		\$ 7,500	\$ 15,000		180,000

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e Mate	erial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
TOTAL - CONT	 ROL HOUSE / PANELS / GENERATOR				\$	1,678,925		\$ 1,232,275		\$	2,911,200
7. MISC ITEMS											
7.1	Conduit & Cable Trench System	1,200.0	LF	\$ 185.00	\$	222,000	\$ 170.00	\$ 204,000	\$ 355	\$	426,000
7.2	Rigid Bus, Fittings & Insulators	3,000.0	LF	\$ 125.07	7 \$	375,210	\$ 237.10	\$ 711,300	\$ 362	\$	1,086,510
7.3	Strain Bus, Connectors & Insulators	0.0	LF	\$ 39.30	\$	-	\$ 53.35	\$ -	\$ 93	\$	-
7.4	Grounding System	16,900.0	LF	\$ 6.93	\$ \$	117,117	\$ 32.58	\$ 550,602	\$ 40	\$	667,719
7.5	Strain Bus Insulators - 345kV	0	EA	\$ 2,000	\$	-	\$ 1,050	\$ -	\$ 3,050	\$	-
7.6	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$	-	\$ 750	\$ -	\$ 2,150	\$	-
7.7	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$	-	\$ 550	\$ -	\$ 1,550	\$	-
7.8	Low Voltage AC Station Service	1	LS	\$ 50,000) \$	50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.9	SSVT Service	1	LS	\$ 45,000) \$	45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 125,000) \$	125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000		180,000	\$ 180,000	\$ 180,000	\$ 360,000	+	360,000
7.12		_			+				7 000,000	+	
7.13										+	
7.14										+	
7.15					+					+	
7.16					+					\vdash	
										+	
7.17					+					—	
7.18										—	
7.19										—	
7.20										—	
7.21											
7.22											
7.23										<u> </u>	
7.24											
7.25											
TOTAL - MISC	ITEMS				\$	1,114,327		\$ 1,890,902		\$	3,005,229
D. Knicke	erbocker 345kV Substation - Install				\$	7,039,773		\$ 7,942,227		\$	14,982,000
8. MOB/DEMC	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1	LS	\$ -	\$	-	\$ 149,820	\$ 149,820	\$ 149,820	\$	149,820
	Project Management, Material Handling & Amenities						·		·	†	
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 924,697	\$ 924,697	\$ 924,697	\$	924,697
8.3	Utility PM and Project Oversite	1	LS		Ś	_	\$ 149,820	\$ 149,820	\$ 149,820	\$	149,820
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	Ś	-	\$ 149,820	\$ 149,820	\$ 149,820	-	149,820
0.4		1	L3	- ب	۰	-	143,820	143,820 ب	7 143,820	+	143,620
0.5	Engineering Design Engineering	1	1.0	\$ -	Ś		\$ 1.198.560	ć 4400 FC0	ć 4400 FCC	-	1 100 500
8.5	Design Engineering		LS LS		\$	-	. , ,	\$ 1,198,560 \$ -	\$ 1,198,560	\$	1,198,560
	LIDAR	-		· ·	+ -		*	1 *		+ -	- 44.000
	Geotech	4	EA	\$ -	\$		\$ 3,500				14,000
	Surveying/Staking	1	Site	\$ -	\$	-	\$ 104,874	\$ 104,874	\$ 104,874	 \$	104,874
	Testing & Commissioning				4.					 	
	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 374,550	\$ 374,550	\$ 374,550	<u> </u>	374,550
	Permitting and Additional Costs				\perp					↓	
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 44,946	\$ 44,946	\$ 44,946	Ś	44,946

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.13	Real Estate Costs (New)	•	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	563,182	\$ 563,182	\$ -	\$ -	\$ 563,182	\$ 563,182
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 14,982	\$ 14,982	\$ 14,982	\$ 14,982
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 563,182		\$ 3,406,069		\$ 3,969,250

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D. SS Knickerbocker - Install

NAT - NYPA - T029 - (Segment B) I. Greenbush Substation - Removal Total: \$ 71,954

NAT - NYPA - T029 - (Se	gment B)				
	Supply		Installation		Total
I. Greenbush Substation - Removal					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -	\$	-	\$	-
2. SUBSTATION FOUNDATIONS	\$ -	\$	12,000	\$	12,000
3. SUBSTATION STRUCTURES	\$ -	\$	-	\$	-
4. MAJOR EQUIPTMENT	\$ -	\$	7,000	\$	7,000
5. SMALL EQUIPTMENT / MATERIALS	\$ -	\$	35,000	\$	35,000
6. CONTROL HOUSE / PANELS	\$ -	\$	7,200	\$	7,200
7. MISC ITEMS	\$ -	\$	-	\$	-
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ -	\$	10,754	\$	10,754
CONTRACTOR MARK-UP (OH&P)	\$ -	\$	-	\$	-
SUBTOTAL:	\$ -	\$	71,954	\$	71,954
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$	-	\$	-
TOTAL:	\$ -	\$	71,954	\$	71,954

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Jesci	μu	OH O	Wor	٨.

Estimate Revision:

5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
I. Green	bush Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -		\$ -	\$ 14,200	
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -		\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -		\$ -	\$ 2,400	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	'	\$ -	\$ -	_	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2a 2.2b		0	EA EA	T .		\$ 7,200		\$ 7,200	
2.20 2.2c	Capacitor Bank Foundations Caisson DE Foundations (for DE A frame str stand alone)	0	EA EA	\$ -	H :	\$ 32,000		\$ 32,000	
۷.۷۱	Caisson DE Foundations (for DE A Italine Str Stand dione)	l U	EA	-	\$ -	22,000		22,000	-

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -		\$ -	\$ 11,000	\$ -
2.2e	Switch Stand Foundations	0		\$ -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
2.2g	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j 2.2k	Instrument Transformer Stand Foundations	0	EA EA	\$ -	\$ - \$ -	\$ 2,400 \$ 2,400	\$ - \$ -	\$ 2,400 \$ 2,400	
2.2K 2.2m	Arrester Stand Foundations Wave Trap Stand Foundations	0		\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ - \$ -
2.2m	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	-	-	-	· -	· -	-
2.3	115kV								
2.3a	Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g 2.3h	Bus Support 3ph Foundations	0		\$ -	\$ - \$ -	\$ -	\$ -	\$ - \$ -	\$ - \$ -
2.3j	Bus Support 1 Ph Foundations Instrument Transformer Stand Foundations	2	EA	\$ -	\$ -	\$ 2,400	\$ 4,800	\$ 2,400	\$ 4,800
2.3k	Arrester Stand Foundations	0		\$ -	\$ -	\$ 2,400	\$ 4,800	\$ 2,400	\$ 4,800
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	Š -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
							,		
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad			4	_	4			4
2.5a	Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ -		\$ 12,000		\$ 12,000
	N STRUCTURES								
3.1	345kV		F.	ć	<u>^</u>	ć		^	^
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b 3.1c	Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1u	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	\$ -
3.1g	Instrument Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0		\$ -	\$ -	\$ 27,000		\$ 27,000	
3.2b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -			\$ 27,000	
3.2c	Switch Stands	0		\$ -		\$ 9,750		\$ 9,750	
3.2d	Station Service Transformer Stand	0		\$ -	\$ -		\$ - \$ -	\$ - \$ -	
3.2e 3.2f	Bus Support 3ph Bus Support 1 Ph	0		\$ -	'	\$ 2,250		\$ 2,250	
3.2g	Instrument Transformer Stand	0		\$ -		\$ 2,250		\$ 2,230	
3.2g 3.2h	Arrester Stand	0		\$ -		\$ 1,050		\$ 1,050	
J.211	/ m corer orang	0		1*	. ·	1,030	· -	÷ 1,030	D 10 -£(0

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ 4,500	\$ -	\$ 4,500	\$ -
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	0		\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0		\$ -	\$ -		\$ -	\$ -	\$ -
	**	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand Arrester Stand						•		
3.3h		0		\$ -	\$ -	\$ -	\$ -	\$ -	
3.3j	Wave Trap Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
					,				
	TATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU									
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks	0		\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	
	especies sums		2,	Ť	Ÿ	ÿ 12,000	<u> </u>	ÿ .2,000	<u> </u>
4.3	115kV								
4.3a	Circuit Breakers	1	EA	\$ -	\$ -	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
4.3b	Capacitor Banks	0		\$ -	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000
4.50	Capacitor Banks	U	EA	, -	, -	· ·	· -	, -	-
TOTAL MANO	R EQUIPTMENT				\$ -		\$ 7,000		\$ 7,000
	IPTMENT / MATERIALS				\$ -		\$ 7,000		\$ 7,000
5.1	345kV				4	4		4	
5.1a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.1b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	
5.1c	VT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0		\$ -	\$ -	\$ 2,500		\$ 2,500	
5.1f	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500	š -	\$ 5,500	
5.2c	VT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2u 5.2e	CCVT'S	0		\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	
5.2f	Arresters	0		\$ -	\$ -	\$ 2,500	\$ -	, , , , , , , , , , , , , , , , , , , ,	
5.2g	Wave Traps	0		\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0		\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.3c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3d	CT'S	0	EA		\$ -	\$ -	\$ -	\$ -	\$ -
5.3e	CCVT'S	2			\$ -	\$ 17,500		\$ 17,500	
5.3f	Arresters	0		\$ -	\$ -	\$ 1,500		\$ 1,500	
5.3g	Wave Traps	0			\$ -		\$ -		\$ -
5.3h	Station Service Transformers	0			\$ -		\$ -	\$ -	\$ -
5.3j	Fuses	0			\$ -		\$ -	\$ -	\$ -
	. 4505	0		1 7	Y	¥ "	¥	¥ "	D 20 -f (0

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ -		\$ 35,000	\$	\$ 35,000
	IOUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000 \$	\$ -
6.2	Protection and Telecom Equipment Panels	2	EA	\$ -	\$ -	\$ 3,600	\$ 7,200	\$ 3,600 \$	\$ 7,200
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -		\$ - 9	
6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ - 9	\$ -
6.5	SCADA and Communications	0		\$ -	\$ -	\$ -	-	\$ - 9	
6.6	Low Voltage AC Distribution	0		\$ -	\$ -	\$ -		\$ - 9	
6.7	DC Distribution System	0		\$ -	\$ -	\$ -		\$ - \$	
6.8	Security	0		\$ -	\$ -	\$ -		\$ - \$	
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -		\$ - 9	
6.10	Generator	0	EA	\$ -	\$ -	\$ -		\$ - 9	
0.10	Cenerator		LA.	7	7	7	,	· '	
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ 7,200		\$ 7,200
7. MISC ITEMS					, -		7,200	,	, 7,200
7. IVIISC 11 EIVIS	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000 \$	\$ -
7.1	Rigid Bus, Fittings & Insulators	0		\$ -	\$ -	\$ 42,000.00		\$ 42,000 \$	
7.2	Strain Bus, Connectors & Insulators	0	LS	\$ -	\$ -	\$ 126.25		\$ 21,000	
				+ '					
7.4	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000 \$, -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ -	Ś	\$ -
I Groon	huch Substation Removal				s -		\$ 61,200	Ś	\$ 61,200
	bush Substation - Removal				÷ -		\$ 01,200	9	61,200
8. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 612	\$ 612	\$ 612 \$	\$ 612
	Project Management, Material Handling & Amenities						i l		
	Desirat Management O. Chaffing / Includes DNA Field Foreigness / Companision Colondales								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ 3,777	\$ 3,777	\$ 3,777	\$ 3,777
	and Cost Manager, SHEQ Staff, and Admin Staff)						i .		
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 612	\$ 612	\$ 612 \$	\$ 612
8.4	Site Accommodation, Facilities, Storage	1	LS	Ś -	\$ -	\$ 612		\$ 612	
	Engineering					/			
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 4,896	\$ 4,896	\$ 4,896 \$	\$ 4,896
8.6	LiDAR	-	LS	\$ -	\$ -	\$ -		\$ - \$	
8.7	Geotech		EA	\$ -	\$ -	\$ 3,500	-	\$ 3,500	
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 428		\$ 428	
0.0	Testing & Commissioning	-	JILC	-	<u> </u>	7 420	'	7 420 9	
8.9	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 1,530	\$ -	\$ 1,530 \$	\$ -
6.9		-	LS	· -	, -	1,530	2 -	φ 1,530 Ş	, -
0.10	Permitting and Additional Costs		16		ļ <u>.</u>		-		
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -		\$ - \$	
8.11	Environmental Mitigation	<u> </u>	LS	\$ -	\$ -	\$ -		\$ - \$	
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 184		\$ 184 \$	
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	-	\$ - \$	
	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -		\$ - \$	
8.14		_	LS	\$ -	\$ -	\$ -		\$ - \$	
8.15	Legal Fees								A .
	Legal Fees Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ - \$	\$ -
8.15				\$ - \$ -	\$ - \$ -	\$ - \$ -		\$ - \$ \$ - \$	
8.15 8.16		-	LS	<u> </u>			\$ -		\$ -
8.15 8.16 8.17	Allowance for Funds Used During Construction (AFUDC)	-	LS LS	\$ -	\$ -	\$ -	\$ -	\$ - \$	\$ - \$ -

NAT - NYPA - T029 - (Segment B) F. Schodack Substation - Install

Total: \$ 2,621,224

NAT - NYPA - To	029 - (Segment i	В)			
		Supply	Installation		Total
F. Schodack Substation - Install					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	4,050	\$ 11,250	\$	15,300
2. SUBSTATION FOUNDATIONS	\$	201,690	\$ 216,000	\$	417,690
3. SUBSTATION STRUCTURES	\$	60,680	\$ 60,680	\$	121,360
4. MAJOR EQUIPTMENT	\$	104,000	\$ 120,000	\$	224,000
5. SMALL EQUIPTMENT / MATERIALS	\$	316,520	\$ 226,000	\$	542,520
6. CONTROL HOUSE / PANELS	\$	192,815	\$ 147,815	\$	340,630
7. MISC ITEMS	\$	168,552	\$ 259,305	\$	427,857
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	83,865	\$ 448,002	\$	531,867
CONTRACTOR MARK-UP (OH&P)	\$		\$ -	\$	-
SUBTOTAL:	\$	1,132,172	\$ 1,489,052	\$	2,621,224
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	Ś	1.132.172	\$ 1.489.052	Ś	2.621.224

Description	of Work:									
Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
F. Schod	ack Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$		\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	150	CY	\$	27		\$ 75	\$ 11,250	\$ 102	\$ 15,300
1.3	Substation Fence	0	LF	\$	100		\$ 100		\$ 200	
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
	REP/ GRADING/ FENCING / CIVIL					\$ 4,050		\$ 11,250		\$ 15,300
	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	0	EA	\$	14,940		\$ 16,000		\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025		\$ 60,000		\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145		\$ 28,000		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145		\$ 28,000		\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	\$	4,482		\$ 4,800		\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482		\$ 4,800		\$ 9,282	
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800		\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$	4,482		\$ 4,800		\$ 9,282	
2.1k	Arrester Stand Foundations	0	EA	\$	4,482		\$ 4,800		\$ 9,282	
2.1m	Wave Trap Stand Foundations	0	EA	\$	4,482		\$ 4,800	+ '	\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p								1		
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820		\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410		\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410		\$ 24,000		\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$	3,735		\$ 4,000		\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$	3,735		\$ 4,000	\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$	3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$	3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -

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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	2	EA	\$ 5,229	\$ 10,458	\$ 5,600	\$ 11,200	\$ 10,829	\$ 21,658
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$ 16,434	\$ 131,472	\$ 17,600	\$ 140,800	\$ 34,034	\$ 272,272
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
	Switch Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	\$ -
	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
	Bus Support 3ph Foundations	4	EA	\$ 2,988	\$ 11,952		\$ 12,800		\$ 24,752
	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
	Instrument Transformer Stand Foundations	6	EA	\$ 2,988	\$ 17,928				\$ 37,128
	Arrester Stand Foundations	6	EA	\$ 2,988	\$ 17,928			\$ 6,188	· · · · · · · · · · · · · · · · · · ·
	Wave Trap Stand Foundations	4	EA	\$ 2,988	\$ 11,952			\$ 6,188	
	Station Service Foundations	0	EA	\$ -	\$ -		\$ -		\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0		\$ 74,700	\$ -			\$ 154,700	
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	•	\$
	Control House Foundations / Pad								
2.5a	Control House / Pad	0	EA	\$ 76,194	\$ -		\$ -		
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b	60' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c	50' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CURCT	TATION FOUNDATIONS				\$ 201,690		\$ 216,000		\$ 417,690
3. SUBSTATION					\$ 201,090		\$ 216,000		\$ 417,090
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -			\$ 74,000	
	Switch Stands	0		\$ 14,800	\$ -	-	·	\$ 29,600	
	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -	\$ 14,800		\$ 29,600	
	Bus Support 3ph	0	EA	\$ -	\$ -		\$ -		\$ -
	Bus Support 1 Ph	0		\$ 3,700	\$ -	\$ 3,700		\$ 7,400	<u>'</u>
	Instrument Transformer Stand	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
	Arrester Stand	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
	Wave Trap Stand	0	EA	\$ 7,400	\$ -	\$ 7,400	\$ -	\$ 14,800	\$ -
3.1k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	230kV		EA.	ć 22.222		ć 22.000	ć	ć	^
	Substation A-Frame Structures - Stand alone	0		\$ 33,300	\$ -	,	\$ -	\$ 66,600	
	Substation A-Frame Structures - Shared Column Switch Stands	0	EA EA	\$ 33,300	\$ - \$ -	. ,	•	\$ 66,600 \$ 24,050	\$ - \$ -
	Station Service Transformer Stand	0	EA EA	\$ 12,025 \$ 12,025	\$ -		\$ - \$ -	\$ 24,050	
		0		, , , , ,	\$ -	7		, , , , , , , , , , , , , , , , , , , ,	
	Bus Support 3ph Bus Support 1 Ph	0		\$ 2,775		\$ 2,775		\$ 5,550	
ا ۲۰۷۱	Instrument Transformer Stand	0		\$ 1,295				\$ 2,590	
	Arrester Stand	0		\$ 1,295				\$ 2,590	
3.2g								\$ 11,100	
3.2g 3.2h		n	I FA						
3.2g 3.2h 3.2j	Wave Trap Stand	0							
3.2g 3.2h 3.2j				\$ 6,475		\$ 6,475		\$ 12,950	
3.2g 3.2h 3.2j 3.2k	Wave Trap Stand Misc. Structures 115kV	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.2g 3.2h 3.2j 3.2k 3.3	Wave Trap Stand Misc. Structures		EA EA		\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3c	Switch Stands	0	EA	\$	7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
	Fuse Stand	0	EA	\$.,	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
	Bus Support 3ph	0	EA	\$	3,330		\$ 3,330	\$ -	\$ 6,660	\$ -
	Bus Support 1 Ph	4	EA	\$	1,850		\$ 1,850		\$ 3,700	\$ 14,800
	Instrument Transformer Stand	6	EA	\$	740		\$ 740		\$ 1,480	
	Arrester Stand	6	EA	\$	740	. ,	\$ 740	\$ 4,440	\$ 1,480	\$ 8,880
	Wave Trap Stand	2	EA	\$	3,700				\$ 7,400	\$ 14,800
3.3k	Misc. Structures	0	EA	\$	6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	ATION STRUCTURES					\$ 60,680		\$ 60,680		\$ 121,360
4. MAJOR EQU										
	345kV					4				4
-	Circuit Breakers	0		\$	300,000	•	\$ 80,000	\$ -	\$ 380,000	\$ -
	Capacitor Banks	0	EA	\$		\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
	345 kV - 230 kV Auto Transformer	0	EA	\$		•	\$ 750,000	\$ -	\$ 750,000	\$ -
	345 kV - 115 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
	230kV		F.*		250.000	ć	ć 20.000	ć	ć 220.655	A
	Circuit Breakers	0	EA	\$	250,000	\$ -	\$ 80,000	\$ -	\$ 330,000	\$ -
4.2b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
	115kV	2	F.A.	ć	F2.000	ć 101.000	ć co.000	ć 420.000	ć 442.000	ć 224.000
	Circuit Breakers	2	EA	\$	52,000	. , ,	\$ 60,000	\$ 120,000	\$ 112,000	
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL - MAIO	R EQUIPTMENT					\$ 104.000		\$ 120.000		\$ 224.000
	PTMENT / MATERIALS					\$ 104,000		\$ 120,000		\$ 224,000
	345kV									
	Line Switches - 3ph w/ motor operator	0	EA	\$	40,000	ċ	\$ 15,000	\$ -	\$ 55,000	\$ -
		0	EA	\$	35,000	\$ - \$ -	\$ 15,000	\$ -	\$ 52,500	\$ - \$ -
	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA	\$	25,000		\$ 17,500		\$ 37,000	
	CT'S	0	EA	\$	13,000				\$ 21,000	\$ -
	CCVT'S	0	EA	\$	13,000		\$ 8,000	\$ -	\$ 21,000	\$ -
	Arresters	0	EA	\$			\$ 1,500		\$ 21,000	\$ -
	Wave Traps	0	EA	\$	13,000	\$ - \$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
	Station Service Transformers	0	EA	\$	200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1i	Station Service mansionners	0	LA	7	200,000	, -	5 30,000	· -	\$ 250,000	,
3.1]										
5.2	230kV									
	Line Switches - 3ph w/ motor operator	0	EA	\$	35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$		\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
	VT'S	0	EA	\$	13,000		\$ 8,000		\$ 21,000	•
	CT'S	0	EA	\$		\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
	CCVT'S	0	EA	\$		\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
	Arresters	0	EA	\$	5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
	Wave Traps	0	EA	\$	13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
	Station Service Transformers	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$ -
5.2j				ľ						
5.3	115kV									
	Line Switches - 3ph w/ motor operator	2	EA	\$	33,000		\$ 15,000	\$ 30,000	\$ 48,000	\$ 96,000
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$	28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
	VT'S	6	EA	\$	13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
	CT'S	6	EA	\$	13,000	\$ 78,000	\$ 8,000	\$ 48,000	\$ 21,000	\$ 126,000
5.3e	CCVT'S	6	EA	\$	8,000		\$ 8,000	\$ 48,000	\$ 16,000	\$ 96,000
	Arresters	6		\$	3,420					
	Wave Traps	2		\$	13,000					
	Station Service Transformers	0		\$		\$ -	·	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
										•
	LEQUIPTMENT / MATERIALS					\$ 316,520		\$ 226,000		\$ 542,520
6. CONTROL HO	OUSE / PANELS / GENERATOR									
6.1	CONTROL HOUSE	0	EA	\$	551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$ -
6.2	Protection and Telecom Equipment Panels	2	EA	\$	35,000	\$ 70,000	\$ 12,500	\$ 25,000	\$ 47,500	\$ 95,000
0.2	rocccion and relecom Equipment raneis		L EM	1 7	33,000	70,000	12,300 ب	y 23,000	47,300	3 95,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$ -
6.4	Control Cables	1	LS	\$	122,815	\$ 122,815	\$ 122,815	\$ 122,815	\$ 245,630	\$ 245,630
6.5	SCADA and Communications	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.7	DC Distribution System	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$ -
6.8	Security	0	EA	\$.,	\$ -	\$ 7,500	\$ -		\$ -
6.9	Fire Alarm	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$ -
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$ -
TOTAL - CONTE	ROL HOUSE / PANELS / GENERATOR					\$ 192,815		\$ 147,815		\$ 340,630
7. MISC ITEMS						\$ 152,013		\$ 147,613		\$ 340,030
7.1	Conduit & Cable Trench System	530.0	LF	\$	185.00	\$ 98,050	\$ 170.00	\$ 90,100	\$ 355	\$ 188,150
7.2	Rigid Bus, Fittings & Insulators	0.0	LF	\$		\$ 58,030	\$ 170.00	\$ 90,100		\$ 188,130
7.3	Strain Bus, Connectors & Insulators	300.0	LF	\$	39.30	_	\$ 53.35			
7.4	Grounding System	800.0	LF	\$		\$ -	\$ -	\$ -		\$ -
7.5	Strain Bus Insulators - 345kV	0	EA	Š		\$ -	\$ 1,050	7		\$ -
7.6		0	EA	\$	1,400	•				\$ -
7.6	Strain Bus Insulators - 230kV Strain Bus Insulators - 115kV	24	EA	\$			\$ 750	\$ 13,200		\$ 37,200
7.7	Low Voltage AC Station Service	0	LS	\$	50,000	\$ 24,000	\$ 75,000	\$ 13,200		\$ 37,200
7.8	SSVT Service	0	LS	\$		\$ -	\$ 45,000	\$ -		\$ -
7.10	Control Conduits from Trench to Equipment	1	LS	\$	14,000		\$ 45,000	7	,	\$ 84,000
7.10	Misc. Materials (Above and Below Ground)	1	LS	\$	20,712		\$ 70,000	\$ 70,000		
7.11	Wilse. Materials (Above and below Ground)	1	LJ	3	20,712	\$ 20,712	\$ 70,000	3 70,000	3 30,712	3 30,712
7.13										
7.14									-	
7.15										
7.16										
7.17										
7.18										
7.19										
7.20										
7.21										
7.22 7.23										
7.24 7.25										
TOTAL - MISC	ITEMS					\$ 168,552		ć 250.205		\$ 427.857
								\$ 259,305		, , , , , , , , , , , , , , , , , , , ,
F. Schoda	ack Substation - Install					\$ 1,048,307		\$ 1,041,050		\$ 2,089,357
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
8.1	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 20,894	\$ 20,894	\$ 20,894	\$ 20,894
	Project Management, Material Handling & Amenities									
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 128,956	\$ 128,956	\$ 128,956	\$ 128,956
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 20,894	\$ 20,894	\$ 20,894	\$ 20,894
	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 20,894	\$ 20,894	\$ 20,894	
	Engineering									
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 167,149	\$ 167,149	\$ 167,149	\$ 167,149
8.6	LiDAR	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	4	EA	\$	-	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	\$ 14,000
8.8	Surveying/Staking	1	Site	\$	-	\$ -	\$ 14,625	\$ 14,625	\$ 14,625	\$ 14,625
	Testing & Commissioning									
	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 52,234	\$ 52,234	\$ 52,234	\$ 52,234
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs		LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 6,268	\$ 6,268	\$ 6,268	\$ 6,268
	Real Estate Costs (New)	-	LS	\$						\$ -
8.13									— —	
8.13 8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility) Legal Fees	-	LS LS	\$	-					\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 83,865	\$ 83,865	\$ -	\$ -	\$ 83,865	\$ 83,865
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 2,089	\$ 2,089	\$ 2,089	\$ 2,089
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 83,865		\$ 448,002		\$ 531,867

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NAT - NYPA - T029 - (Segment B) G. Schodack Substation - Removal

Total: \$ 160,133

NAT - NYPA - T029 - (Se	gment B)			
	Sı	ıpply	Installation	Total
G. Schodack Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$ -
2. SUBSTATION FOUNDATIONS	\$	-	\$ 62,400	\$ 62,400
3. SUBSTATION STRUCTURES	\$	-	\$ 73,800	\$ 73,800
4. MAJOR EQUIPTMENT	\$	-	\$ -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ -	\$ -
6. CONTROL HOUSE / PANELS	\$	-	\$ -	\$ -
7. MISC ITEMS	\$	-	\$ -	\$ -
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 23,933	\$ 23,933
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	-	\$ 160,133	\$ 160,133
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	-	\$ 160,133	\$ 160,133

P	es	crı	pt	ıon	ot	W	or	k:

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
G. Schoo	lack Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	. ,	\$ -	\$ 14,200	
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -		\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -		\$ -	\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000		\$ 22,000	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -		\$ 11,000		\$ 11,000	
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200		\$ 5,200	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	Page 27 of 60

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph Foundations	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Steel Transmission Pole Dead Ends (1ph.) Foundations	6	EA	\$ -	\$ -	\$ 10,400	\$ 62,400	\$ 10,400	\$ 62,400
2.4	Transformer Foundations	-						•	
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Bod								
2.5 2.5a	Control House Foundations / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Control House / Pad (40'x125') Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.30	Generator Foundation	U	EA	, -	· -	· -	-	· -	-
2.6	Lightning Mast Foundations								
	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION FOUNDATIONS				\$ -		\$ 62,400		\$ 62,400
3. SUBSTATION									
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA EA	\$ - \$ -	\$ -	\$ 2,250 \$ -	\$ - \$ -	\$ 2,250 \$ -	\$ - \$ -
	Bus Support 1 Ph Instrument Transformer Stand	0	EA EA	\$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -	\$ -
3.1g 3.1h	Arrester Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ - \$ -	\$ -
	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ - \$ -	\$ -
5.1K				-	· ·	·	7	7	T
3.2	230kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ 27,000		\$ 27,000	
3.2c	Switch Stands	0	EA	\$ -	\$ -	\$ 9,750	\$ -	\$ 9,750	\$ -
3.2d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 1 Ph	0		\$ -		\$ 2,250		\$ 2,250	
	Instrument Transformer Stand	0		\$ -		\$ 1,050		\$ 1,050	
	Arrester Stand	0		\$ -	\$ -			\$ 1,050	
	Wave Trap Stand	0		\$ -	\$ -	\$ 4,500		\$ 4,500	
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	AAFIN								
3.3	115kV								

3.3b S 3.3c S 3.3d F 3.3e B 3.3f B 3.3g II 3.3h A 3.3j V	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Fuse Stand Bus Support 3ph Bus Support 1 Ph	0 0							
3.3c S 3.3d F 3.3e B 3.3f B 3.3g II 3.3h A 3.3j V	Switch Stands Fuse Stand Bus Support 3ph	0		\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
3.3d F 3.3e B 3.3f B 3.3g II 3.3h A	Fuse Stand Bus Support 3ph		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e B 3.3f B 3.3g II 3.3h A 3.3j V	Bus Support 3ph	_	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3f B 3.3g II 3.3h A 3.3j V		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g II 3.3h A 3.3j V	Rus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h A 3.3j V	Bus support 1111	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j V	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k N	Misc. Structures	6	EA	\$ -	\$ -	\$ 12,300	\$ 73,800	\$ 12,300	\$ 73,800
	ATION STRUCTURES				\$ -		\$ 73,800		\$ 73,800
4. MAJOR EQUIP									
	345kV								<u> </u>
	Circuit Breakers	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Banks	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
4.1c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
	230kV			4	4	A =		A =	
	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	
4.2b C	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	14Fla/								
	115kV					A	A	<u> </u>	A
	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.3b C	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - MAJOR	FOLUDTAFAIT				\$ -		<u> </u>		\$ -
	•				\$ -		\$ -		\$ -
	PTMENT / MATERIALS								
	345kV	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Line Switches - 3ph w/ motor operator								
	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA EA	\$ -	\$ - \$ -	\$ 5,500 \$ -		\$ 5,500 \$ -	\$ -
	CT'S	0	EA	\$ -	\$ -		\$ - \$ -	\$ -	\$ -
	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
3.1e	CCV13	0	EA	, -	, -	\$ 2,300	· -	\$ 2,300	-
5.1f A	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g V	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	Station Service Transformers	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1j	Station Service mansionners		LA.	7	7	,	7	7	·
3.2,									
5.2 2	230kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	VT'S	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	CCVT'S	0	EA	\$ -	\$ -		\$ -	\$ 1,500	
	Arresters	0	EA	\$ -	\$ -		\$ -	\$ 2,500	
	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3 1	115kV								
	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b C	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.3c V	VT'S	0		\$ -	\$ -		\$ -		\$ -
	CT'S	0		\$ -			\$ -		\$ -
	CCVT'S	0		\$ -	\$ -		\$ -		\$ -
	Arresters	0		\$ -	\$ -	\$ 1,500		\$ 1,500	
	Wave Traps	0		\$ -			\$ -		\$ -
	Station Service Transformers	0		\$ -	\$ -		\$ -		\$ -
5.3j F	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	EQUIPTMENT / MATERIALS				\$ -		\$ -		\$ -
6. CONTROL HO	OUSE / PANELS / GENERATOR								

COUNTIN HOUSE	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3 32-300 Enteries	6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.4 Control Cables 1 1.5 5 5 5 5 5 5 5 5 5	6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5 SOAD and Communications 9 6.5 5 5 5 5 5 5 5 5 5	6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6 Low Visiting Act Circulations 0 FA 5 5 5 5 5 5 5 5 5	6.4	Control Cables	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
For Controllation System	6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
B. Security	6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
B. Security	6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Section Content			0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CONTROL FOUNDATION			0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CONTROL FOUNDATION	6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7.2 Conduit & Calable Teach System 0 6A 5 5 4,000 00 5 5 4,000 00 5 5 1,000 5 7.2 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 7.3 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000 5 1,000						\$ -		\$ -		\$ -
2.1 Conduit & Caleb Farmal System 0 EA 5 5 4,000 00 5 5 4,000 00 5 5 1,000 5 7.2 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000 5 7.3 1,000	7. MISC ITEMS									
7.3 Strain Bus, Connectors & Insulators			0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.3 Strain Bus, Connectors & Insulators		·		LS	\$ -	\$ -	\$ 10.500.00	\$ -		
7.4 Grounding System					\$ -	\$ -		\$ -		
7.5						s -				
7.6					Ť	7	7,	7	, ,,,,,,	*
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S. NOBOJENNOB, ENGINEERING, PERMITTING, Tâc, PM & INDRECTS:		ITENAC								٨
R. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:						-				*
Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilizati	G. Schod	ack Substation - Removal				\$ -		\$ 136,200		\$ 136,200
S	8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
Project Management & Staffing (Includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)		Contractor Mobilization / Demobilization								
Project Management, Material Handling & Amenities	8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 1,362	\$ 1,362	\$ 1,362	\$ 1,362
R.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) LS		Project Management, Material Handling & Amenities						,		
Site Accommodation, Facilities, Storage	8.2		1	LS			\$ 8,406	\$ 8,406	\$ 8,406	\$ 8,406
Engineering	8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 1,362	\$ 1,362	\$ 1,362	\$ 1,362
Engineering	8.4		1	LS	\$ -	\$ -	\$ 1,362	\$ 1,362	\$ 1,362	\$ 1,362
8.6 LiDAR		Engineering								
S.7 Geotech S.8 Surveying/Staking Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site Site	8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 10,896	\$ 10,896	\$ 10,896	\$ 10,896
8.8 Surveying/Staking - Site \$ - \$ - \$ 953 \$ - \$ 953 \$ \$ \$ \$ \$ \$ \$ \$ \$	8.6	LiDAR	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Testing & Commissioning Section & Commissioning of T-Line and Equipment Section & Section & Commissioning of T-Line and Equipment Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section & Section	8.7	Geotech	-	EA	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500	\$ -
R.9 Testing & Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning of T-Line and Equipment Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissioning & Permitting Costs Commissi	8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 953	\$ -	\$ 953	\$ -
Real Estate Costs (New) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs (Incumbent Utility) Real Estate Costs										
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8.10 Environmental Licensing & Permitting Costs									,	
8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12 Warranties / LOC's 1 LS \$ - \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409 \$ 409			-		<u> </u>	\$ -	<u> </u>	<u> </u>	\$ -	•
8.13 Real Estate Costs (New) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$		-	1							
8.14 Real Estate Costs (Incumbent Utility) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ </td <td></td> <td></td> <td></td> <td></td> <td>'</td> <td></td> <td></td> <td></td> <td></td> <td></td>					'					
8.15 Legal Fees - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
8.16 Allowance for Funds Used During Construction (AFUDC) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td></td> <td></td> <td></td> <td>'</td> <td>т</td> <td></td> <td></td> <td></td> <td></td>					'	т				
8.17 - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td></td> <td></td> <td></td> <td><u> </u></td> <td>т</td> <td></td> <td></td> <td>·</td> <td>•</td>					<u> </u>	т			·	•
8.18 Sales Tax on Materials 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						7				
8.19 Fees for permits, including roadway, railroad, building or other local permits 1 LS \$ - \$ 136 \$ 136 \$		Sales Tax on Materials							·	
						т		7	т	
TOTAL - MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:			·				7 130		T 130	
V 23,333 4						,		25,555		20,000

NAT - NYPA - T029 - (Segment B) H. Churchtown Substation - Install

Total: \$ 18,812,564

NAT - NYPA - TO	29 - (Segment L	3)				
		Supply		Installation		Total
H. Churchtown Substation - Install						
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	133,850	\$	2,459,550	\$	2,593,400
2. SUBSTATION FOUNDATIONS	\$	964,690	\$	1,039,500	\$	2,004,190
3. SUBSTATION STRUCTURES	\$	416,000	\$	433,085	\$	866,170
4. MAJOR EQUIPTMENT	\$	416,000	\$	480,000	\$	896,000
5. SMALL EQUIPTMENT / MATERIALS	\$	1,384,800	\$	938,800	\$	2,323,600
6. CONTROL HOUSE / PANELS	\$	2,344,525	\$	1,517,025	\$	3,861,550
7. MISC ITEMS	\$	1,013,691	\$	1,488,020	\$	2,501,711
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	535,251	\$	3,230,692	\$	3,765,943
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	7,208,807	\$	11,586,672	\$	18,812,564
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL		7 200 007	A	11 506 673	ė	10 013 FC4

Description	of Work:									
Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
H. Churc	chtown Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	2.0	ACRES	\$	-	\$ -	\$ 1,125,000	\$ 2,250,000	\$ 1,125,000	\$ 2,250,000
1.2	Station stone within substation fence.	900	CY	\$	27	\$ 24,300	\$ 75	\$ 67,500	\$ 102	\$ 91,800
1.3	Substation Fence	1,050	LF	\$	100		\$ 100	\$ 105,000	\$ 200	\$ 210,000
1.4	Permanent Access Road - 20'-Wide	130	LF	\$	35	\$ 4,550	\$ 285	\$ 37,050	\$ 320	\$ 41,600
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14				_						
	PREP/ GRADING/ FENCING / CIVIL					\$ 133,850		\$ 2,459,550		\$ 2,593,400
	N FOUNDATIONS					\$ 155,650		\$ 2,435,330		\$ 2,353,400
2.1	345kV									
2.1a	Circuit Breaker Foundations	0	EA	Ś	14,940	\$ -	\$ 16,000	\$ -	\$ 30,940	\$ -
2.1b	Capacitor Bank Foundations	0	EA	Ś	56.025	•	\$ 60,000		\$ 116.025	•
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145	\$ -	\$ 28,000		\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$	4,482		\$ 4,800	\$ -	\$ 9,282	
2.1m	Wave Trap Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
				-						
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952		\$ 12,800	\$ -	\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	<u> </u>
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410		\$ 24,000		\$ 46,410	
2.2d 2.2e	Caisson DE Foundations (for DE A frame str shared column) Switch Stand Foundations	0	EA EA	\$	22,410 3,735		\$ 24,000 \$ 4,000		\$ 46,410 \$ 7,735	
2.2e 2.2f	Station Service Transformer Stand Foundation	0	EA EA	\$	3,735		\$ 4,000	\$ -	\$ 7,735	
2.2f 2.2g		0	EA EA	Ś	-,	\$ - \$ -	\$ 4,000	\$ - \$ -	\$ 7,735	\$ - \$ -
Z.2g	Bus Support 3ph Foundations	1 0	EA	٦	-	· -	- د	- د	- ·	?

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Estimate Revision:

2.70 Bat August 1	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	e Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.20	2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,73	5 \$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m Now Two Stand Foundations 0 FA 5 1,755 5 4,000 5 5 7,755 5	2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,7	5 \$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2-70 Min. Granture Foundations	2.2k		0					\$ -	\$ 7,735	\$ -
2.5		'						7		
State Process State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State St		Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.30 Croat Resear Foundations 8 CA 5 5,225 5 4,030 5 4,040 5 1,040 5 2,130 5 5,000 5 5 4,040 5 1,040 5 2,130 5 5,000 5 5 6,041 5 2,130 5 5,000 5 5 6,000 5 5 6,000 5 5 6,000 5 5 6,000 5 5 6,000 5 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5	2.2p									
2.30 Croat Resear Foundations 8 CA 5 5,225 5 4,030 5 4,040 5 1,040 5 2,130 5 5,000 5 5 4,040 5 1,040 5 2,130 5 5,000 5 5 6,041 5 2,130 5 5,000 5 5 6,000 5 5 6,000 5 5 6,000 5 5 6,000 5 5 6,000 5 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5 6,000 5										
2.30 Cassactor form Foundations 0 CA \$ 33,551 \$ \$ \$ \$ \$ \$ \$ \$ \$			0	EA.	ć 5.3°	0 6 44 022	ć F.600	ć 44.000	ć 40.030	ć oc.caa
2.5 Casson Of Foundations (or Diff A from att. 1, shed along) 20 FA 5 13,649 5 23,000 5 13,000 5 34,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,00										
2-30 Casson Of Froundations (or DF A farme tot shared course) 0 FA 5 16,404 5 17,716 5 10,240 5 5,108 5 10,240 5 5,108 5 5 10,240 5 5,108 5 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108 5 5,108		'								
23 Select Stand Foundations										
2.21 Ivas bland Foundations										•
2.18										
2.48 But Support 1 Pt Standartons 24 1A \$ 2,008 \$ 71,777 \$ 3,000 \$ 7,800 \$ 4,108 \$ 2,00 \$ 7,800 \$ 4,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$										
2.3 Instrument Transformer Stand Foundations \$15 EA \$ 2,988 \$ 4,920 \$ 3,200 \$ 10,300 \$ 6,188 \$ 2.00 \$ 10,000 \$ 6,188 \$ 2.00 \$ 10,000 \$ 6,188 \$ 2.00 \$ 10,000 \$ 6,188 \$ 2.00 \$ 10,000 \$ 6,188 \$ 2.00 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000 \$ 10,000										
2.3m Wave Frag Stand Foundations 10 EA 5 2,088 5 2,080 5 3,000 5 2,000 5 6,188 5 2,300 3,000 5 2,000 5 6,188 5 2,300 3,000 5 2,000 5 2,775 5 5 5 5 5 5 5 5 5		**		EA	\$ 2,98					
2.3m										
2.30 Misc. Structure Foundations	2.3m	Wave Trap Stand Foundations	10	EA	\$ 2,98	8 \$ 29,880	\$ 3,200	\$ 32,000	\$ 6,188	\$ 61,880
2.30 Misc. Structure Foundations	2.3n	Station Service Foundations	1	EA		5 \$ 3,735	\$ 4,000	\$ 4,000		
2.4a 345-28W Transformer (poundation w/ OI Containment 0 EA S 97,110 S 5 100,000 S S 201,110 S 2.4a 234W-135W Transformer (poundation w/ OI Containment 0 EA S 74,700 S S S S S S S S S	2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -		
2.4a 345-28W Transformer (poundation w/ OI Containment 0 EA S 97,110 S 5 100,000 S S 201,110 S 2.4a 234W-135W Transformer (poundation w/ OI Containment 0 EA S 74,700 S S S S S S S S S										
2.4b										
2.4c 2384/158V Transformer Foundation w/ Oil Containment		, ,						\$ -		
2.4d 1154V-69VIV Paraformer Foundation w/ Oil Containment 0 EA 5								·		
2.5 Control House Foundations Fad		· · · · · · · · · · · · · · · · · · ·						· -		•
2-30 Centrol House/ Pad 1 EA \$ 33,615 \$ 36,000 \$ 36,000 \$ 69,015 \$	2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	Ş -	\$ -	\$ -	\$ -
2-5a Control House / Part 1	2.5	Control House Foundations / Bad								
2.5b Generator Foundation 1 EA \$ 16,000 \$ 17,000 \$ 17,000 \$ 33,000 \$ 2.5c Station Service Distribution line 1-ph. 1 1 1 5 \$ \$ \$ \$ \$ \$ \$ \$ \$		·	1	ГА	ć 22.61	F ¢ 22.61F	¢ 26,000	ć 26.000	ć 60.61F	\$ 69,615
2.56 Station Service Distribution (ine -1ph. 1 1 1 1 1 1 1 1 1										
2.6 Ughtning Mast Foundation										
2.6a 70 Lightning Mast Foundation 4 EA 5 5,229 5 20,916 5 5,000 5 10,829 5 2,66		·		LS	7	7	ŷ 0,500	\$ 0,500	9 0,500	y 0,500
2.66			4	EA	\$ 5.2	9 \$ 20,916	\$ 5.600	\$ 22,400	\$ 10.829	\$ 43,316
TOTAL - SUBSTATION FOUNDATIONS S 964,690 S 1,039,500 S 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3. US\$ 3.		- G - G			· · · · · · · · · · · · · · · · · · ·					
S.SUBSTATION STRUCTURES	2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.18 Substation A-Frame Structures - Stand alone 0 EA \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,000 \$. \$ 37,0										
3.1 345kV	TOTAL - SUBST	ATION FOUNDATIONS				\$ 964,690		\$ 1,039,500	!	\$ 2,004,190
3.1a Substation A-Frame Structures - Stand alone 0 EA \$ 37,000 \$. \$ \$ \$ \$ \$ \$ \$ \$										
3.1b Substation A-Frame Structures - Shared Column 0 EA S 37,000 S - S 74,000 S		345kV								
3.1c Switch Stands 0 EA S 14,800 S - S 14,800 S - S 29,600 S										
3.1d Station Service Transformer Stand 0 EA S 14,800 S - S 14,800 S - S 29,600 S 3.1e Bus Support 3ph 0 EA S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S								7		•
3.1e Bus Support 3ph 0 EA S S S S S S S S S										
3.1f Bus Support 1 Ph							, , , , , , , , , , , , , , , , , , , ,		,	<u> </u>
3.1g Instrument Transformer Stand 0 EA \$ 1,850 \$ - \$ 1,850 \$ - \$ 3,700 \$ 3.1h Arrester Stand 0 EA \$ 1,850 \$ - \$ 1,850 \$ - \$ 3,700 \$ 3.1h Wave Trap Stand 0 EA \$ 1,850 \$ - \$ 5,7400 \$ - \$ 5,7400 \$ 3.1h Lightning Masts - 70' 0 EA \$ 6,475 \$ - \$ 5,7400 \$ 3.2 230kV 3.2 Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 66,600 \$ 3.2 Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 66,600 \$ 3.2c Switch Stands 0 EA \$ 33,300 \$ - \$ 5,66,600 \$ 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 24,050 \$ 3.2e Bus Support 3ph 0 EA \$ 12,025 \$ - \$ 5,2775 \$ - \$ 5,2500 \$ 3.2f Bus Support 1Ph 0 EA \$ 1,295 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ 3.2k Misc. Structures 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550		** *					'			
3.1h Arrester Stand 0 EA 5 1,850 5 - 5 1,850 5 - 5 3,700 \$ 3.1j Wave Trap Stand 0 EA 5 7,400 5 - 5 7,400 5 - 5 14,800 5 3.1k Lightning Masts - 70' 0 EA 5 6,475 5 - 5 14,800 5 3.2 230kV										·
3.1 Wave Trap Stand										
3.1k Lightning Masts - 70'								7		<u> </u>
3.2 230kV 3.2 3Ubstation A-Frame Structures - Stand alone 3.2 Substation A-Frame Structures - Shared Column 5.2 Switch Stands 5.2 Switch Stands 6. Column Structures - Shared Column 7. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column 8. Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Structures - Shared Column Str							. ,		. ,	
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 66,600 \$ \$ \$ \$ \$ \$ \$ \$ \$	3.1K	Lagraning mode 70			, 0,4.	- -	- 0,473	-	- 12,550	· ·
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 66,600 \$ \$ \$ \$ \$ \$ \$ \$ \$	3.2	230kV								
3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <			0	EA	\$ 33,30	0 \$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ -	3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,30	0 \$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ - \$ 5,550 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590 \$ - \$ 2,590	3.2c	Switch Stands	0	EA	\$ 12,0	5 \$ -	\$ 12,025	\$ -	\$ 24,050	\$ -
3.2f Bus Support 1 Ph 0 EA \$ 2,775 \$ - \$ 2,775 \$ - \$ 5,550 \$ 3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 1,295 \$ - \$ 1,295 \$ - \$ 1,295 \$ - \$ 1,100 \$ 3.2k Misc. Structures 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$										
3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 11,100 \$ 3.2k Misc. Structures 0 EA \$ 6,475 \$ - \$ 12,950 \$		***								
3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$ 3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 11,100 \$ 3.2k Misc. Structures 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$										
3.2j Wave Trap Stand 0 EA \$ 5,550 \$ - \$ 5,550 \$ - \$ 11,100 \$ 3.2k Misc. Structures 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$										
3.2k Misc. Structures 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$										
		·							. ,	·
	3.2k	Misc. Structures	0	ΕA	\$ 6,4	5 \$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	3.3	115kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3a	Substation A-Frame Structures - Stand alone	5	EA	\$ 18,50	92,500	\$ 18,500	\$ 92,500	\$ 37,000	\$ 185,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,50) \$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	16	EA	\$ 7,95	5 \$ 127,280	\$ 7,955	\$ 127,280	\$ 15,910	\$ 254,560
3.3d	Fuse Stand	1	EA	\$ 7,95			\$ 7,955	\$ 15,910	\$ 15,910
3.3e	Bus Support 3ph	20	EA	\$ 3,33			\$ 66,600	\$ 6,660	\$ 133,200
3.3f	Bus Support 1 Ph	24	EA	\$ 1,85				\$ 3,700	
3.3g	Instrument Transformer Stand	51	EA		37,740		\$ 37,740	\$ 1,480	\$ 75,480
3.3h	Arrester Stand	15	EA	\$ 74			\$ 11,100	\$ 1,480	\$ 22,200
3.3j	Wave Trap Stand	5	EA	\$ 3,70		\$ 3,700	\$ 18,500	\$ 7,400	\$ 37,000
3.3k	Misc. Structures	4	EA	\$ 6,47		\$ 6,475	· ,	\$ 12,950	\$ 51,800
3.31	Station Service Transformer Support Stand	1	EA	\$ 1,11		\$ 1,110	. ,	\$ 2,220	
4. MAJOR EQU	ATION STRUCTURES				\$ 433,085		\$ 433,085		\$ 866,170
4. WAJOR EQU 4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ 300,00) \$ -	\$ 80,000	\$ -	\$ 380,000	\$ -
4.1a 4.1b	Capacitor Banks	0	EA	\$ 300,00	s -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.1b 4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000		\$ 750,000	
4.10	230kV	U	EA	3 -	, -	\$ 730,000	· -	\$ 730,000	-
4.2a	Circuit Breakers	0	EA	\$ 250,00) \$ -	\$ 80,000	\$ -	\$ 330,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ 230,00	s -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.20	Capacitor Banks	0	LA.	7	7	3 00,000	7	\$ 00,000	7
4.3	115kV								
4.3a	Circuit Breakers	8	EA	\$ 52,00	\$ 416,000	\$ 60,000	\$ 480,000	\$ 112,000	\$ 896,000
4.3b	Capacitor Banks	0	EA	\$ 52,00	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ 650,000
55	Capacitor Burino		271	Ť	Ť	ψ σσ,σσσ	Ť	φ σσ,σσσ	*
TOTAL - MAJO	R EQUIPTMENT				\$ 416,000		\$ 480,000		\$ 896,000
	PTMENT / MATERIALS				7		+ 100,000		7 223,222
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,00) \$ -	\$ 15,000	\$ -	\$ 55,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,00		\$ 17,500	\$ -	\$ 52,500	\$ -
5.1c	VT'S	0	EA	\$ 25,00) \$ -	\$ 12,000	\$ -	\$ 37,000	\$ -
5.1d	CT'S	0	EA	\$ 13,00) \$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1e	CCVT'S	0	EA	\$ 13,00) \$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1f	Arresters	0	EA	\$ 6,50) \$ -	\$ 1,500	\$ -	\$ 8,000	\$ -
5.1g	Wave Traps	0	EA	\$ 13,00) \$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.1h	Station Service Transformers	0	EA	\$ 200,00) \$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j									
5.2	230kV		_			1			
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,00		\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,00		\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$ 13,00		\$ 8,000	\$ -	\$ 21,000	
5.2d	CT'S	0	EA EA	\$ 13,00		\$ 8,000 \$ 6.000	\$ -	\$ 21,000	\$ - \$ -
5.2e	CCVT'S	0	EA	\$ 10,00		7	\$ - \$ -	\$ 16,000	
5.2f 5.2g	Arresters Wave Traps	0	EA EA	\$ 5,00 \$ 13,00		\$ 6,000 \$ 8,000	\$ - \$ -	\$ 11,000 \$ 21,000	\$ - \$ -
5.2g 5.2h	Station Service Transformers	0	EA EA	\$ 13,00	\$ - \$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2ii	Station Service Halistofficis	U	EM	-	-	-	-	-	-
3.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	5	EA	\$ 33,00) \$ 165,000	\$ 15,000	\$ 75,000	\$ 48,000	\$ 240,000
5.3b	Disconnect Switches - 3ph w/ manual operator	16	EA	\$ 28,00			· ,	\$ 45,500	
	VT'S	15		\$ 13,00	- '		. ,		
5.3d	CT'S	15	EA	\$ 13,00					
5.3e	CCVT'S	21	EA) \$ 168,000				
5.3f	Arresters	15	EA		51,300			\$ 9,420	
5.3g	Wave Traps	5	EA	\$ 13,00					
5.3h	Station Service Transformers	1	EA	\$ 75,00	5 75,000	\$ 35,000	\$ 35,000	\$ 110,000	\$ 110,000
5.3j	Fuses	3	EA	\$ 7,50	22,500	\$ 3,600	\$ 10,800	\$ 11,100	\$ 33,300
TOTAL - SMALI	EQUIPTMENT / MATERIALS				\$ 1,384,800		\$ 938,800		\$ 2,323,600
									D 22 -£(0

B	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
December and Telecom Lougement Provide 20	. CONTROL H	DUSE / PANELS / GENERATOR									
5-3 22/OC Nationals 2	6.1	CONTROL HOUSE	1	EA	\$ 292,500	\$ 292,500	\$ 85,000	\$ 85,000	\$ 377,500	\$	377,500
6.4 Carrot Cables	6.2	Protection and Telecom Equipment Panels	30	EA	\$ 35,000	\$ 1,050,000	\$ 10,000	\$ 300,000	\$ 45,000	\$	1,350,000
S. S. ASADA and Communications 1								-			200,000
E.		Control Cables	1								974,050
6.7 C Constitution System 2 EA \$ 9,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 1	6.5	SCADA and Communications	1	EA	\$ 50,000	\$ 50,000	\$ 100,000	\$ 100,000	\$ 150,000	\$	150,000
6.8 Security	6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
SA 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0						·					300,000
E.		·									15,000
TOTAL-CONTROL HOUSE / PANELS / GENERATOR	6.9	Fire Alarm	1	EA	\$ 7,500			\$ 7,500	\$ 15,000	\$	15,000
Zamon Carlos	6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$	180,000
Zamon Carlos											
2.7.1		ROL HOUSE / PANELS / GENERATOR				\$ 2,344,525		\$ 1,517,025		\$	3,861,550
Rigid Ris, Fritings & Insulators					4	4					
7.3 Strain Bus, Connectors & Insulators	7.1	Conduit & Cable Trench System	1,300.0	LF	\$ 185.00	\$ 240,500	\$ 170.00	\$ 221,000	\$ 355	Ş	461,500
7.4 Grounding System 10,500 LF S 6.93 S 72,755 S 32.58 S 340,00 S Ad S	7.2	Rigid Bus, Fittings & Insulators	1,800.0	LF	\$ 125.07	\$ 225,126	\$ 237.10	\$ 426,780	\$ 362	\$	651,906
7.5 Strain Bus Insolutions - 3456V	7.3	Strain Bus, Connectors & Insulators	1,000.0	LF	\$ 39.30	\$ 39,300	\$ 53.35	\$ 53,350	\$ 93	\$	92,650
7.6 Strain Bus insulations - 230kV 0 EA \$ 1,400 \$ - \$ 7.70 \$ - \$ 2,150 \$ 5 \$ 7.70 \$ \$ 5 \$ 7.70 \$ \$ 5 \$ 7.70 \$ \$ 7.77 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1.70 \$ 1					,	·		-		<u> </u>	414,855
7.7 Strain Bus insulations - 115kV 36											-
7.9 SSY Service						т					
7.9 SSVT Service											55,800
7.10 Control Conduits from Trench to Equipment 1 1.5 5 125,000 5 125,000 5 125,000 5 250,000 5 360,000 5 7.12 7.12 7.13 7.14 7.15 7.16 7.15 7.16 7.17 7.18 7.18 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19 7.19		Low Voltage AC Station Service	1			\$ 50,000	\$ 75,000	\$ 75,000			125,000
Till Misc Materials (Above and Below Ground) 1 1 15 5 180,000 5 180,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,000 5 360,			1					\$ 45,000			90,000
7.12 7.13 7.14 7.15 7.16 7.17 7.18 7.19 7.19 7.19 7.20 7.21 7.21 7.21 7.22 7.21 7.22 7.23 7.24 7.25 7.25 7.26 7.27 7.27 7.28 7.29 7.29 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.25 7.26 7.27 7.27 7.27 7.28 7.29 7.29 7.20 7.21 7.21 7.22 7.23 7.24 7.25 7.25 8.06/0000, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization	7.10	Control Conduits from Trench to Equipment	1	LS	\$ 125,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 250,000	\$	250,000
7.13	7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.14	7.12										
7.15	7.13										
7.16	7.14										
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7.23 7.24 7.25 7.75 70TAL MISCITEMS S 1,013,691 \$ 1,488,020 \$ 2 H. Churchtown Substation - Install \$ \$ 6,690,641 \$ \$ 8,355,980 \$ 15 8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization 8.1 Mob/Demob \$ 1.0 LS \$ - \$ - \$ 150,466 \$ 150,466 \$ 150,466 \$ Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite \$ 1 LS \$ - \$ - \$ 150,466 \$ 150,466 \$ 150,466 \$ 8.4 Site Accommodation, Facilities, Storage \$ 1 LS \$ - \$ - \$ 150,466 \$ 150,466 \$ 150,466 \$ 8.5 Design Engineering \$ 1 LS \$ - \$ - \$ 150,466 \$ 150,466 \$ 150,466 \$ 8.6 LIDAR \$ - LS \$ - \$ - \$ - \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,	7.22										
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TOTAL - MISC ITEMS										1	
H. Churchtown Substation - Install \$ 6,690,641 \$ 8,355,980 \$ 15		TEMS				\$ 1,013,691		\$ 1,488,020		\$	2,501,711
S. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / D	J Churs	htown Substation Install									
Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilizati						0,090,041		0,355,980 ج		۶	15,046,621
8.1 Mob / Demob 1.0 LS \$ - \$ - \$ \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466											
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8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite 8.4 Site Accommodation, Facilities, Storage 8.5 Design Engineering 8.6 LiDAR 1 LS 1 LS 2 928,685 \$ 928,685 \$ 928,685 \$ 928,685 \$ 928,685 \$ 928,685 \$ 928,685 \$ 928,685 \$ 928,685 \$ \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,	8.1		1.0	LS	\$ -	\$ -	\$ 150,466	\$ 150,466	\$ 150,466	\$	150,466
8.2 and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite 1 LS \$ - \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,46		Project Management, Material Handling & Amenities								ļ	
8.3 Utility PM and Project Oversite 1 LS \$ - \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 184 \$ 5 te Accommodation, Facilities, Storage 1 LS \$ - \$ - \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466 \$ 150,466	8.2		1	LS			\$ 928,685	\$ 928,685	\$ 928,685	\$	928,685
8.4 Site Accommodation, Facilities, Storage 1 LS \$ - \$ - \$ 150,466 \$ 150,466 \$ Engineering 1 LS \$ - \$ - \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730		- 1								-	
Engineering 1 LS \$ - \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1 8.6 LIDAR - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$											150,466
8.5 Design Engineering 1 LS \$ - \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 \$ 1,203,730 </td <td></td> <td></td> <td>1</td> <td>LS</td> <td>\$ -</td> <td>\$ -</td> <td>\$ 150,466</td> <td>\$ 150,466</td> <td>\$ 150,466</td> <td>\$</td> <td>150,466</td>			1	LS	\$ -	\$ -	\$ 150,466	\$ 150,466	\$ 150,466	\$	150,466
8.6 LIDAR - LS \$ - \$ - \$ - \$ - \$ - \$ 8.7 Geotech										!	
8.7 Geotech											1,203,730
											-
$\begin{bmatrix} & & & & & & & & & & & & & & & & & & &$											14,000
8.8 Surveying/Staking 1 Site \$ - \$ 105,326 \$ 105,326 \$ \$ 105,326 \$	8.8	Surveying/Staking	1	Site	\$ -	\$ -	\$ 105,326	\$ 105,326	\$ 105,326	\$	105,326

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e Mate	rial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TO	DTAL
	Testing & Commissioning										
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 376,166	\$ 376,166	\$ 376,166	\$	376,166
	Permitting and Additional Costs										
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 45,140	\$ 45,140	\$ 45,140	\$	45,140
8.13	Real Estate Costs (New)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$	-	\$ 91,200	\$ 91,200	\$ 91,200	\$	91,200
8.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 535,25	1 \$	535,251	\$ -	\$ -	\$ 535,251	\$	535,251
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 15,047	\$ 15,047	\$ 15,047	\$	15,047
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	535,251		\$ 3,230,692		\$	3,765,943

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NAT - NYPA - T029 - (Segment B) I. Churchtown Substation - Removal

Estimate Revision: 5 Total: \$ 1,032,084

NAT - NYPA - T029 - (Se	gment B)				
	Supply		Installation		Total
I. Churchtown Substation - Removal					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ 25,900	\$	25,900
2. SUBSTATION FOUNDATIONS	\$	-	\$ 340,400	\$	340,400
3. SUBSTATION STRUCTURES	\$	-	\$ 252,600	\$	252,600
4. MAJOR EQUIPTMENT	\$	-	\$ 24,600	\$	24,600
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 60,000	\$	60,000
6. CONTROL HOUSE / PANELS	\$	-	\$ 150,000	\$	150,000
7. MISC ITEMS	\$	-	\$ 25,078	\$	25,078
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 153,506	\$	153,506
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	-	\$ 1,032,084	\$	1,032,084
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	Ś		\$ 1,032,084	Ś	1,032,084
			2,002,00	T	

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
I. Church	town Substation - Removal								
1. SITE PREP/ (GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.		ACRES	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -
1.2	Station stone within substation fence.		CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	740	LF	\$ -	\$ -	\$ 35	\$ 25,900	\$ 35	\$ 25,900
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ 25,900		\$ 25,900
2. SUBSTATION	FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1n	Reactor Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations		EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations		EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$ -	\$ -	\$ 11,000	\$ -	\$ 11,000	\$ -
2.2e	Switch Stand Foundations		EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.2f	Station Service Transformer Stand Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations		EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations		EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
	Arrester Stand Foundations		EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
	Wave Trap Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Misc. Structure Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
	Circuit Breaker Foundations	2	EA	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ 30,0
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stand Foundations	18	EA	\$ -	\$ -	\$ 5,200	\$ 93,600	\$ 5,200	\$ 93,6
	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph Foundations	6	EA	\$ -	\$ -	\$ 5,200	\$ 31,200	\$ 5,200	\$ 31,2
2.3j	Instrument Transformer Stand Foundations	3	EA	\$ -	\$ -		\$ 15,600	\$ 5,200	\$ 15,6
	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Steel Transmission Pole Deadend Fnds (1Ph)	9	EA	\$ -	\$ -	\$ 15,000	\$ 135,000	\$ 15,000	\$ 135,0
2.5μ	Steel Hansinission Fole Deadend Hids (1FH)	,		, -	,	3 13,000	3 133,000	3 13,000	3 133,0
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	345-115kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	230kV-115kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ 67,500	\$ -	\$ 67,500	\$ -
	115kV-69kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
£.4u	225A STATE TO ANALON WY ON CONTAINMENT			· -	-	-	-	7	-
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ -	\$ -	\$ 14,200	\$ 14,200	\$ 14,200	\$ 14,2
2.5a 2.5b	Generator Foundation	1	EA	\$ - \$ -	\$ - \$ -	\$ 14,200	\$ 14,200	\$ 14,200	\$ 14,2
2.30	Generator i odnidation		EA		, -	- ·	-	- ب	-
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	4	EA	\$ -	\$ -	\$ 5,200	\$ 20,800	\$ 5,200	\$ 20,8
2.6b	7.0 Eightining Wast Foundation	4		\$ -	\$ -	\$ 3,200	\$ 20,800	\$ 3,200	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.00					, -	- ·	-	- ب	-
							4 245		A 7:2:
	ATION FOUNDATIONS N STRUCTURES				\$ -		\$ 340,400		\$ 340,4
	345kV								
5.1	YACEC								D 27 -64

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1a	Substation A-Frame Structures - Stand alone		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1c	Switch Stands		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone		EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column		EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2c	Switch Stands		EA	\$ -	\$ -		\$ -	\$ 9,750	
3.2d	Station Service Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ 9,730	\$ -
3.2e	Bus Support 3ph		EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	\$ -
3.2f	Bus Support 1 Ph		EA	\$ -	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 2,250	
3.2g	Instrument Transformer Stand		EA	\$ -	\$ -	\$ 1,050	\$ -	\$ 1,050	\$ -
3.2g 3.2h	Arrester Stand		EA	\$ -	\$ -		\$ -	\$ 1,050	-
				+ '			·	, ,	
3.2j	Wave Trap Stand		EA	-		1	\$ -	,	•
3.2k	Misc. Structures		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3	115kV				A	45,000	A	4 45 000	A
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -		\$ -	\$ 15,000	
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	9	EA	\$ -	\$ -	\$ 6,450	\$ 58,050	\$ 6,450	\$ 58,050
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	6		\$ -	\$ -		\$ 38,700	\$ 6,450	
3.3g	Instrument Transformer Stand	3	EA	\$ -	\$ -	\$ 6,450	\$ 19,350	\$ 6,450	\$ 19,350
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Steel Transmission Pole Deadend (1Ph)	9	EA	\$ -	\$ -	\$ 12,300	\$ 110,700	\$ 12,300	\$ 110,700
3.41	Lightning Mast	4	EA	\$ -	\$ -	\$ 6,450	\$ 25,800	\$ 6,450	\$ 25,800
TOTAL - SUBS	TATION STRUCTURES				\$ -		\$ 252,600		\$ 252,600
4. MAJOR EQU	UPTMENT								
4.1	345kV								
4.1a	Circuit Breakers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers		EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks		EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	2	EA	\$ -	\$ -	\$ 12,300	\$ 24,600	\$ 12,300	\$ 24,600
4.3b	Capacitor Banks	0		\$ -	\$ -		\$ -		\$ -
TOTAL - MAIO	 R EQUIPTMENT				\$ -		\$ 24,600		\$ 24,600
							2.,300		D 20 - f (0

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5. SMALL EQUI	PTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c	VT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters		EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	·	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2c	VT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S		EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.2f	Arresters		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2g	Wave Traps		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
5.3b	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,500
5.3c	VT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.3d	CT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.3e	CCVT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,500
5.3f	Arresters	9	EA	\$ -	\$ -	\$ 1,500	\$ 13,500	\$ 1,500	\$ 13,500
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMALI	EQUIPTMENT / MATERIALS				\$ -		\$ 60,000		\$ 60,000
	DUSE / PANELS / GENERATOR				*		7 55,555		
6.1	CONTROL HOUSE	1	EA	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
6.2	Protection and Telecom Equipment Panels		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.10			- In	Ŧ	T	7	· ·	7	Ŧ
TOTAL - CONTI	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ 150,000		\$ 150,000
7. MISC ITEMS									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
7.1	Conduit & Cable Trench System		LS	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	535.0	LF	\$ -	\$ -	\$ 46.88	\$ 25,078	\$ 47	\$ 25,078
7.3	Strain Bus, Connectors & Insulators		LF	\$ -	\$ -	\$ 39.35	\$ -	\$ 39	\$ -
7.4	Grounding System		LS	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12				1					
7.13 7.14									
7.14									
TOTAL - MISC	ITEMS				\$ -		\$ 25,078		\$ 25,078
I. Church	town Substation - Removal				\$ -		\$ 878,578		\$ 878,578
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:						, , , ,		7
O. IVIOD, DEIVIO	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 8,786	\$ 8,786	\$ 8,786	\$ 8,786
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 54,226	\$ 54,226	\$ 54,226	\$ 54,226
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 8,786	\$ 8,786	\$ 8,786	\$ 8,786
8.4	Site Accommodation, Facilities, Storage	1.0	LS	\$ -	\$ -	\$ 8,786	\$ 8,786	\$ 8,786	\$ 8,786
	Engineering								
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 70,286	\$ 70,286	\$ 70,286	\$ 70,286
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 6,150	\$ -	\$ 6,150	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 21,964	\$ -	\$ 21,964	\$ -
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 2,636	\$ 2,636	\$ 2,636	\$ 2,636
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16 8.17	Allowance for Funds Used During Construction (AFUDC)	-	LS LS	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
8.17	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 879	\$ -	\$ 879	\$ -
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 153,506		\$ 153,506

NAT - NYPA - T029 - (Segment B) J. Pleasant Valley Substation - Install

Total: \$ 3,524,980

NAT - NYPA - T029 - (Se	gment	В)		
		Supply	Installation	Total
J. Pleasant Valley Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	11,025	\$ 14,625	\$ 25,650
2. SUBSTATION FOUNDATIONS	\$	161,177	\$ 171,300	\$ 332,477
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$ 88,800
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$ 280,000
5. SMALL EQUIPTMENT / MATERIALS	\$	260,500	\$ 129,000	\$ 389,500
6. CONTROL HOUSE / PANELS	\$	560,900	\$ 253,400	\$ 814,300
7. MISC ITEMS	\$	409,950	\$ 457,275	\$ 867,225
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	131,836	\$ 595,192	\$ 727,028
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,779,788	\$ 1,745,192	\$ 3,524,980
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,779,788	\$ 1,745,192	\$ 3,524,980

Description of Work:	D	es	crı	ptı	on	ot	w	or	k:
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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	e Material S	Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Pleasa	nt Valley Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$	-	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$	7 \$	2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	90	LF	\$ 10	0 \$	9,000	\$ 100	\$ 9,000	\$ 200	\$ 18,000
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	5 \$	-	\$ 285	\$ -	\$ 320	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
	REP/ GRADING/ FENCING / CIVIL				\$	11,025		\$ 14,625		\$ 25,650
	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	1	EA	\$ 14,9		14,940				
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,02		-	\$ 60,000	\$ -	\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,14		-	\$ 28,000	\$ -	\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,14		-	\$ 28,000	\$ -	\$ 54,145	
2.1e	Switch Stand Foundations	6	EA	\$ 4,48		26,892			\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,4	2 \$	-	\$ 4,800		\$ 9,282	
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,48		-	\$ 4,800		\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	9	EA	\$ 4,48		40,338			\$ 9,282	
2.1k	Arrester Stand Foundations	3	EA	\$ 4,4		13,446	, , , , , , , , , , , , , , , , , , , ,	\$ 14,400		, , , , ,
2.1m	Wave Trap Stand Foundations	1	EA	\$ 4,4		4,482		\$ 4,800	\$ 9,282	
2.1n	Station Service Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.1p	Misc. Structure Foundations	0	EA	\$ -	7	-	\$ -	\$ -	\$ -	\$ -
				\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,9		-	\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,82		-	\$ 48,000	\$ -	\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,4		-	\$ 24,000	\$ -	\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,4		-	\$ 24,000		\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,7		-	\$ 4,000		\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,7		-	\$ 4,000	\$ -	\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0		\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0		\$ 2,988	\$ -			\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -			\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	0		\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	0	EA EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	
2.3k 2.3m	Arrester Stand Foundations Wave Trap Stand Foundations	0	EA EA	\$ 2,988 \$ 2,988	\$ - \$ -	\$ 3,200 \$ 3,200	\$ - \$ -	\$ 6,188 \$ 6,188	\$ - \$ -
2.3m	Misc. Structure Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,166	\$ -
2.3p	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	Ů	En	Ŧ .	-	-	-	Ŧ	Ŧ
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House Addition Foundation (25-ft x 50-ft)	1	EA	\$ 61,079	\$ 61,079	\$ 64,100	\$ 64,100	\$ 125,179	\$ 125,179
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600		\$ 10,829	
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL CURC	FATION FOUNDATIONS				¢ 464.477		ć 474.200		ć 222.477
	FATION FOUNDATIONS N STRUCTURES				\$ 161,177		\$ 171,300		\$ 332,477
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	
3.1c	Switch Stands	1	EA	\$ 14,800	\$ 14,800		\$ 14,800	\$ 29,600	\$ 29,600
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -			\$ 29,600	
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	·	\$ -
3.1f	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -	,		\$ 7,400	
3.1g	Instrument Transformer Stand	9		\$ 1,850	\$ 16,650		\$ 16,650	\$ 3,700	
3.1h 3.1j	Arrester Stand Wave Trap Stand	3	EA EA	\$ 1,850 \$ 7,400	\$ 5,550 \$ 7,400		\$ 5,550 \$ 7,400	\$ 3,700 \$ 14,800	\$ 11,100 \$ 14,800
3.1k	Misc. Structures	0		\$ 6,475	\$ 7,400			\$ 12,950	\$ 14,800
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0		\$ 33,300				\$ 66,600	
3.2c	Switch Stands	0		\$ 12,025				\$ 24,050	
3.2d	Station Service Transformer Stand	0		\$ 12,025				\$ 24,050	
3.2e	Bus Support 3ph	0		\$ -	\$ -			\$ -	
3.2f	Bus Support 1 Ph	0		\$ 2,775		\$ 2,775		\$ 5,550	
3.2g	Instrument Transformer Stand	0		\$ 1,295				\$ 2,590	
3.2h	Arrester Stand	0		\$ 1,295		\$ 1,295		\$ 2,590	
3.2j	Wave Trap Stand	0		\$ 5,550				\$ 11,100	
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3	115kV									
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18	,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA		,500		\$ 18,500	š -	\$ 37,000	\$ -
3.3c	Switch Stands	0			,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA		,955			\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA		,330		\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1	,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$	740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$	740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3	,700	\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6	,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	TATION STRUCTURES					\$ 44,400		\$ 44,400		\$ 88,80
4. MAJOR EQU										
	345kV									
4.1a	Circuit Breakers	1	EA		,000		\$ 80,000	\$ 80,000	\$ 280,000	
4.1b	Capacitor Banks	0		\$	_		\$ 80,000	\$ -	\$ 80,000	
4.1c	345 kV - 230 kV Auto Transformer	0		\$	$\overline{}$		\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$	-	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2	230kV					_				
4.2a	Circuit Breakers	0			,000		\$ 80,000	\$ -	\$ 195,000	
4.2b	Capacitor Banks	0	EA	\$ 52	,000	\$ -	\$ 80,000	\$ -	\$ 132,000	\$ -
4.3	115kV		E4		000	A	d 50,000	<u> </u>	4 205 000	•
4.3a	Circuit Breakers	0	EA		,000	т	\$ 60,000	\$ -	\$ 285,000	
4.3b	Capacitor Banks	0	EA	\$	-	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL MAIO	 R EQUIPTMENT					ć 200.000		\$ 80.000		\$ 280.00
	PTMENT / MATERIALS					\$ 200,000		\$ 80,000		\$ 280,00
	345kV									
5.1a	Line Switches - 3ph w/ motor operator	1	EA	\$ 40	,000	\$ 40,000	\$ 15,000	\$ 15,000	\$ 55,000	\$ 55,00
5.1b	Disconnect Switches - 3ph w/ manual operator	1			,000		\$ 17,500	\$ 17,500	\$ 52,500	\$ 52,50
5.1c	VT'S	3			_		\$ 12,000	\$ 36,000	\$ 37,000	\$ 111,00
5.1d	CT'S	3	EA		,000			\$ 24,000	\$ 21,000	
5.1e	CCVT'S	3			,000		\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,00
5.1f	Arresters	3	EA		,500	\$ 19,500				
5.1g				l\$ 6			5 1.500	\$ 4.500	\$ 8,000	\$ 24.00
	IWave Itaps	1					\$ 1,500 \$ 8,000	\$ 4,500 \$ 8,000	,	
5.1h	Wave Traps Station Service Transformers	1 0	EA	\$ 13	,000,	\$ 13,000	\$ 1,500 \$ 8,000 \$ 50,000	\$ 4,500 \$ 8,000 \$ -	\$ 21,000	
5.1h 5.1j	Station Service Transformers		EA	\$ 13	,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,00
	·		EA	\$ 13	,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,00
	·		EA	\$ 13	,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,00
5.1j	Station Service Transformers		EA EA	\$ 13	,000	\$ 13,000 \$ -	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,00
5.1j	Station Service Transformers 230kV	0	EA EA	\$ 200	,,000	\$ 13,000 \$ - \$ \$	\$ 8,000 \$ 50,000	\$ 8,000 \$ - \$	\$ 21,000 \$ 250,000	\$ 21,00 \$ -
5.1j 5.2 5.2a	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator	0	EA EA EA	\$ 13 \$ 200 \$ \$ 35 \$ 36	i,000 i,000 i,000	\$ 13,000 \$ - \$ \$ - \$ -	\$ 8,000 \$ 50,000 \$ \$ 15,000	\$ 8,000 \$ - \$	\$ 21,000 \$ 250,000 \$ \$ 50,000	\$ 21,00 \$ -
5.1j 5.2 5.2a 5.2b	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S	0 0 0	EA EA EA EA EA	\$ 13 \$ 200 \$ 35 \$ 36 \$ 13 \$ 13	,,000 ,,000 ,,000 ,,000 ,,000 ,,000	\$ 13,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500	\$ 8,000 \$ - \$ - \$ - \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000	\$ 21,00 \$ - \$ - \$ -
5.1j 5.2 5.2a 5.2b 5.2c 5.2d 5.2d 5.2e	Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ 13 \$ 200 \$ 35 \$ 36 \$ 16 \$ 17 \$ 10	,,000 ,,000 ,,000 ,,000 ,,000 ,,000	\$ 13,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 8,000 \$ 50,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	\$ 8,000 \$ - \$ - \$ - \$ - \$ -	\$ 21,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000	\$ 21,00 \$ - \$ - \$ - \$ - \$ -
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Item	Item Description	Estimated Quantity	Unit of Measure	Materia	l Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	•
6. CONTROL H	OUSE / PANELS / GENERATOR										
6.1	CONTROL HOUSE Addition (25-ft x 50-ft)	1	EA	\$	325,000	\$ 325,000	\$ 85,000	\$ 85,000	\$ 410,000	\$ 4	110,000
6.2	Protection and Telecom Equipment Panels	3	EA	\$	35,000	\$ 105,000	\$ 12,500	\$ 37,500	\$ 47,500	\$ 1	142,500
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4	Control Cables	1	LS	\$	130,900	\$ 130,900	\$ 130,900	\$ 130,900	\$ 261,800		261,800
6.5	SCADA and Communications	0	EA	\$		\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0	EA	\$	50,000		\$ 100,000		\$ 150,000		-
6.7	DC Distribution System	0	EA	\$	50,000		\$ 100,000		\$ 150,000		-
6.8	Security Fire Alarm	0	EA EA	\$	7,500 7,500		\$ 7,500 \$ 7,500	\$ -	\$ 15,000 \$ 15,000	\$	-
6.10	Generator	0	EA	\$	100,000		\$ 7,500	·	\$ 180,000		
0.10	Generator	0	LA	7	100,000	, -	3 80,000	· -	3 180,000	,	
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR					\$ 560,900		\$ 253,400		\$ 8	314,300
7. MISC ITEMS						,					
7.1	Conduit & Cable Trench System	800	LF	\$	185.00	\$ 148,000	\$ 170.00	\$ 136,000	\$ 355	\$ 2	284,000
7.2	Rigid Bus, Fittings & Insulators	0	LS	\$	15,008.40	\$ -	\$ 56,904.00	\$ -	\$ 71,912	\$	-
7.3	Strain Bus, Connectors & Insulators	2,500	LF	\$	13.38	\$ 33,450	\$ 39.35	\$ 98,375	\$ 53	\$ 1	131,825
7.4	Grounding System	0	LF	\$	6.93		\$ 32.58		\$ 40		-
7.5	Strain Bus Insulators - 345kV	38	EA	\$,	7 0,000	\$ 1,050	\$ 39,900	\$ 3,050		115,900
7.6	Strain Bus Insulators - 230kV Strain Bus Insulators - 115kV	0	EA EA	\$	1,400 1,000	\$ - \$ -	\$ 750 \$ 550	\$ - \$ -	\$ 2,150 \$ 1,550		-
7.7	Low Voltage AC Station Service	0	LS	\$	50,000		\$ 75,000	т	\$ 1,550		-
7.9	SSVT Service	0	LS	\$	45,000		\$ 45,000		\$ 90,000		
7.10	Control Conduits from Trench to Equipment	1	LS	\$	62,500		\$ 75,000		\$ 137,500		137,500
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	90,000		\$ 108,000		\$ 198,000		198,000
7.12											
7.13											
7.14											
7.15											
7.16											
7.17 7.18											
7.18											
7.13											
7.21											
7.22											
7.23											
7.24											
7.25											
TOTAL - MISC						\$ 409,950		\$ 457,275		\$ 8	367,225
J. Pleasa	nt Valley Substation - Install					\$ 1,647,952		\$ 1,150,000		\$ 2,7	797,952
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob Project Management, Material Handling & Amenities	1	LS	\$	-	\$ -	\$ 27,980	\$ 27,980	\$ 27,980	\$	27,980
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 172,691	\$ 172,691	\$ 172,691	\$ 1	172,691
8.3	Utility PM and Project Oversite	1					\$ 27,980				27,980
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 27,980	\$ 27,980	\$ 27,980	\$	27,980
	Engineering										
8.5	Design Engineering	1	LS	\$		\$ -	\$ 223,836				223,836
8.6	LiDAR	-	LS	\$			\$ -	\$ -	\$ -	\$	- 11000
8.7	Geotech	4		\$			\$ 3,500				14,000
8.8	Surveying/Staking Testing & Commissioning	1	Site	>	-	\$ -	\$ 19,586	\$ 19,586	\$ 19,586	Þ	19,586
8.9	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 69,949	\$ 69,949	\$ 69,949	4	69,949
0.5	resemble commissioning or r-time and Equipment		LJ	۲	-	-	7 03,343	7 03,343	2 03,343	Doga 11	

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	e N	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	otal Unit Rate TO	
	Permitting and Additional Costs										
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 8,394	\$ 8,394	\$ 8,394	\$	8,394
8.13	Real Estate Costs (New)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 131,83	6 \$	131,836	\$ -	\$ -	\$ 131,836	\$	131,836
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 2,798	\$ 2,798	\$ 2,798	\$	2,798
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	131,836		\$ 595,192		\$	727,028

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J. SS Pleasant Valley-Install

NAT - NYPA - T029 - (Segment B) Total: \$ 804,582

NAT - NYPA - T029 - (Segn	NAT - NYPA - T029 - (Segment B)										
		Supply		Installation		Total					
N. Interconnection Milan Station											
1. CLEARING & ACCESS	\$	-	\$	121,100	\$	121,100					
2. FOUNDATIONS	\$	84,375	\$	135,279	\$	219,654					
3. STRUCTURES	\$	130,328	\$	140,393	\$	270,721					
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-					
5. INSULATORS, FITTINGS, HARDWARE	\$	45,200	\$	18,480	\$	63,680					
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	20,792	\$	108,635	\$	129,428					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$						
SUBTOTAL:	\$	280,695	\$	523,887	\$	804,582					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	\$	280,695	\$	523,887	\$	804,582					

Description	of Work:									
Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Inter	connection Milan Station									
1. CLEARING	& ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	1.0	Acre	\$	-	\$ -	\$ 5,000		· ·	
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	500.0	LF	\$		\$ -		\$ 2,000		\$ 2,0
1.5	Matting - Access and ROW	500.0	LF	\$	-	\$ -	\$ 70			
1.6	Matting - To Work Area	525.0	LF	\$	-	\$ -	\$ 70			
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800		\$ 516,800	
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000			
1.9	Work Pads	10,000.0	SF	\$	-	\$ -	T .	\$ 35,200		\$ 35,2
1.10	Restoration for Work Pad areas	2,000.0	SF	\$		\$ -	\$ 0.2			\$ 3
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	-	EA	\$		\$ -	\$ 4,580		7 .,	
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$		\$ -	\$ 4,130		\$ 4,130	
1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	-	EA	\$	750		\$ 1,250		\$ 2,000	
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850		\$ 1,850	
1.18						\$ -		\$ -		\$ -
1.19						\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27		\$ 75		\$ 102	
	RING & ACCESS					\$ -		\$ 121,100		\$ 121,1
2.1	Drilled Pier - 115kV Single Circuit Single Pole Angle/DE	2	EA	\$	42,187	\$ 84,375	\$ 42,639	\$ 85,279	\$ 84,827	\$ 169,6
2.2										
2.3										
2.4										
2.5	Rock Excavation Adder	25	СҮ	\$	-	\$ -	\$ 2,000	\$ 50,000	\$ 2,000	\$ 50,0
2.6						\$ -		\$ -		\$ -
2.7						\$ -		\$ -		\$ -
2.8						\$ -		\$ -		\$ -
2.9						\$ -		\$ -		\$ -

2.10

Estimate Revision:

5

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		\$ -
2.14					\$ - \$ -		\$ - \$ -		\$ - \$ -
TOTAL - FOUN	DATIONS				\$ 84,375		\$ 135,279		\$ - \$ 219,654
3. STRUCTURE					Ų 01,373		Ų 100,275		213,031
3.1	115kV Single Circuit Single Pole Angle/DE	2	Structure	\$ 64,658	\$ 129,316	\$ 64,658	\$ 129,316	\$ 129,316	\$ 258,632
3.2									
3.3					\$ -		\$ -		\$ -
3.4	Install Grounding and Grounding Accessories	2	Pole	\$ 506	т	\$ 5,539	\$ -		\$ - \$ 12,089
3.6	install drounding and drounding Accessories	2	role	3 300	\$ 1,012	3,339	\$ 11,077		\$ -
3.7					\$ -		\$ -		\$ -
3.8					\$ -		\$ -		\$ -
3.9					\$ -		\$ -		\$ -
3.10					\$ -		\$ -		\$ -
3.11					\$ - \$ -		\$ - \$ -		\$ - \$ -
3.13					\$ - \$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
TOTAL - STRUC					\$ 130,328		\$ 140,393		\$ 270,721
	R, SHIELDWIRE, OPGW						-	4	
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90		\$ 5.00			\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel	-	LF LF	\$ 1.35 \$ 0.47		\$ 5.00 \$ 5.00	\$ - \$ -	-	\$ - \$ -
	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$ -	\$ -	\$ 30,000	\$ -		\$ -
4.6	Remove Existing OPGW Cable	-	Mile	\$ -	\$ -	\$ 12,000	\$ -	,	\$ -
4.7	Remove Existing EH7	-	Mile	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$ -
	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.9		-			,				
	Rider Poles - Relocated Rider Poles	-	Set EA	\$ - \$ 1,750	\$ - \$ -	\$ 3,500 \$ 3,500		7 0,000.00	\$ - \$ -
4.11 TOTAL: CONDU	ICTOR, SHIELDWIRE, OPGW:	-	LA	\$ 1,750	\$ -	\$ 3,500	\$ -		\$ -
	FITTINGS, HARDWARE				,		J		_
	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900		\$ 560	\$ -	, ,	\$ -
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	24	Assembly	\$ 1,800		\$ 720	\$ 17,280		\$ 60,480
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900		\$ 560	\$ -	,	\$ -
5.5 5.6	OPGW Assembly - Tangent	-	Assembly Assembly	\$ 200	\$ - \$ -	\$ 150	\$ -		\$ - \$ -
	OPGW Assembly - Intigent	4	Assembly	\$ 250		\$ 150	\$ 600		\$ 1,600
	OHSW Assembly - Tangent	-	Assembly	\$ 200		\$ 150	\$ -		\$ -
5.9	OHSW Assembly - Angle / DE	4	Assembly	\$ 250		\$ 150	\$ 600		\$ 1,600
	OPGW Splice Boxes	-	Set	\$ 1,750		\$ 1,746			\$ -
5.11	OPGW Splice & Test	-	EA	\$ 1,400 \$ 50		\$ 2,520	\$ -	-,	\$ -
5.12 5.13	Spacer - Conductor Vibration Dampers - Conductor	-	EA EA	\$ 50 \$ 35		\$ 35 \$ 35			\$ - \$ -
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$ 27		\$ 35			\$ -
5.15	Guys, Anchors, and Accessories	-	EA	\$ 720		\$ 885	\$ -		\$ -
5.16	Misc. materials (Signs and Markers)	-	Mile	\$ 770	\$ -	\$ 1,006	\$ -		\$ -
5.17									
5.18				-					
5.19 5.20									
	ATOR, FITTINGS, HARDWARE				\$ 45,200		\$ 18,480		\$ 63,680
	· · · · · · ·								
	onnection Milan Station				\$ 259,903		\$ 415,251		\$ 675,154
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization Mob / Demob	1	LS	\$ -	\$ -	\$ 6,752	\$ 6,752	\$ 6,752	\$ 6,752
	Project Management, Material Handling & Amenities	1	L3	<u> </u>		y 0,732	y 0,/32	y 0,732	9 0,732
	-yg	1		1	1	1			

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 41,671	\$ 41,671	\$ 41,671	\$ 41,671
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 6,752	\$ 6,752	\$ 6,752	\$ 6,752
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 6,752	\$ 6,752	\$ 6,752	\$ 6,752
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 33,758	\$ 33,758	\$ 33,758	\$ 33,758
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 2,025	\$ 2,025	\$ 2,025	\$ 2,025
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 4,726	\$ 4,726	\$ 4,726	\$ 4,726
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 2,025	\$ 2,025	\$ 2,025	\$ 2,025
6.13	Real Estate Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$ 20,792	\$ 20,792	\$ -	\$ -	\$ 20,792	\$ 20,792
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 675	\$ 675	\$ 675	\$ 675
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 20,792		\$ 108,635		\$ 129,428

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NAT - NYPA - T029 - (Segment B) Interconnection Knickerbocker Station

Estimate Revision: 5 Total: \$ 1,424,781

NAT - NYPA - T02	9 - (Segment B)					
		Supply		Installation		Total
L. Interconnection Knickerbocker Station						
1. CLEARING & ACCESS	\$	-	\$	482,850	\$	482,850
2. FOUNDATIONS	\$	87,988	\$	184,454	\$	272,441
3. STRUCTURES	\$	222,873	\$	180,838	\$	403,710
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-
5. INSULATORS, FITTINGS, HARDWARE	\$	29,466	\$	17,754	\$	47,220
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	27,226	\$	191,333	\$	218,560
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	367,553	\$	1,057,229	\$	1,424,781
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	367.553	Ś	1.057.229	Ś	1.424.781

Ì	escri	ption	of W	ork:

item	Item Description	Estimated Quantity	Unit of Measure	Material Supply F	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
L. Interc	onnection Knickerbocker Station									
1. CLEARING 8	ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	· ·		
1.3	Access Road	-	LF	7	-	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	3,500.0	LF	т	-	\$ -	\$ 4			
1.5	Matting - Access and ROW	3,500.0	LF	7	-	\$ -	\$ 70			\$ 245,000
1.6	Matting - To Work Area	675.0	LF	т	-	\$ -	\$ 70			\$ 47,250
1.7	Snow Removal	-	LS	7	-	\$ -	\$ 516,800		\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	7	_	\$ -	\$ 10,000	\$ 5,000		\$ 5,000
1.9	Work Pads	45,000.0	SF	т	\rightarrow	\$ -	\$ 4	1,		\$ 158,400
1.10	Restoration for Work Pad areas	9,000.0	SF	т	_	\$ -	\$ 0.2	\$ 1,350		\$ 1,350
1.11	Temporary Access Bridge	-	EA	т	\rightarrow	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	7		\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	т	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	Ψ	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA		000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA		750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	· · · · · · · · · · · · · · · · · · ·	\$ 1,850	\$ 1,850
1.18					_	\$ -		\$ -		\$ -
1.19						\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27	•	\$ 75	·	\$ 102	\$ -
TOTAL - CLEAR	RING & ACCESS					\$ -		\$ 482,850		\$ 482,850
2. FOUNDATIO	ONS									
2.1	1-CKT 115KV 3-POLE TANGENT DEADEND (0°-5°)	6	EA	\$ 2,	750	\$ 16,500	\$ 18,700	\$ 112,200	\$ 21,450	\$ 128,700
2.2	1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	3	EA	\$ 23,	829	\$ 71,488	\$ 24,085	\$ 72,254	\$ 47,914	\$ 143,741
2.3	Rock Excavation Adder	-	CY	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -
2.4										
2.5										
2.6										
2.7										
2.8										

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.9									
2.10									
2.11									
2.12									
2.13									
2.15									
TOTAL - FOUN	DATIONS				\$ 87,988		\$ 184,454		\$ 272,441
3. STRUCTURE	S								
3.1	1-CKT 115KV 3-POLE TANGENT DEADEND (0°-5°)	2	Structure	\$ 67,803		\$ 40,682	\$ 81,363		\$ 216,968
3.2	1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	1	Structure	\$ 82,714		\$ 49,628	\$ 49,628		\$ 132,342
3.3	Install Grounding and Grounding Accessories	9	Pole	\$ 506	\$ 4,554	\$ 5,539	\$ 49,847 \$ -		\$ 54,401 \$ -
3.5					-		ş -		\$ -
3.6					\$ -		\$ -		\$ -
3.7					\$ -		\$ -		\$ -
3.8					\$ -		\$ -		\$ -
3.9					\$ -		\$ -		\$ -
3.10					\$ -		\$ -		\$ -
3.11				-	\$ -		\$ -		\$ -
3.12 3.13				-	\$ - \$ -		\$ - \$ -		\$ - \$ -
					1				
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
TOTAL - STRUC	TURES				\$ 222,873		\$ 180,838		\$ 403,710
4. CONDUCTO	R, SHIELDWIRE, OPGW								
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90		\$ 5.00			\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35		\$ 5.00	\$ -		\$ -
4.3	(1) 3/8" EHS7 Steel	-	LF Nail-	\$ 0.47	' \$ - S -	\$ 5.00			\$ - \$ -
4.5	Remove Existing 115kV Cable From Existing Structures Remove Existing OPGW Cable	-	Mile Mile	\$ -	\$ -	\$ 30,000 \$ 12,000	\$ -	,	\$ - \$ -
4.7	Remove Existing Grow Cable Remove Existing EH7	-	Mile	\$ -	\$ -	\$ 12,000	\$ -		\$ -
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	т	\$ 5.00	,		\$ -
4.9	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-			T.		,	,	
4.10	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -		\$ -
4.11	Rider Poles	-	EA	\$ 1,750		\$ 3,500		\$ 5,250.00	
	JCTOR, SHIELDWIRE, OPGW:				\$ -		\$ -		\$ -
	FITTINGS, HARDWARE		Annuality	\$ 1,800	· S -	\$ 720	\$ -	\$ 2,520	\$ -
5.1 5.2	345kV Tangent (1-Group of 18-Bells Each Assembly) 115kV Tangent (1-Group of 9-Bells Each Assembly)	12	Assembly Assembly	\$ 1,800			т		\$ - \$ 17,520
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	7	Assembly	\$ 1,800					\$ 17,640
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)		Assembly	\$ 900		\$ 560			\$ -
5.5			Assembly		\$ -		\$ -		\$ -
5.6	OPGW Assembly - Tangent	2	Assembly	\$ 200			\$ 300		\$ 700
5.7	OPGW Assembly - Angle / DE	2	Assembly	\$ 250					\$ 800
5.8	OHSW Assembly - Tangent	2	Assembly	\$ 200			\$ 300		\$ 700
5.9 5.10	OHSW Assembly - Angle / DE OPGW Splice Boxes	2	Assembly Set	\$ 250 \$ 1,746		\$ 150 \$ 2,274	\$ 300 \$ 2,274		\$ 800 \$ 4,020
5.10	OPGW Splice & Test	1	EA	\$ 2,520					\$ 5,040
5.12	Spacer - Conductor	-	EA	\$ 50		\$ 35	\$ -		\$ -
5.13	Vibration Dampers - Conductor	-	EA	\$ 35		\$ 35			\$ -
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$ 27		\$ 35			\$ -
5.15	Guys, Anchors, and Accessories	-	EA	\$ 720		\$ 885		9 1,005	\$ -
5.16	Misc. materials (Signs and Markers)	-	Mile	\$ 770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$ -
5.17					1				
5.18 5.19				-	+				
5.19				 	+				
	ATOR, FITTINGS, HARDWARE				\$ 29,466		\$ 17,754		\$ 47,220
	onnection Knickerbocker Station				\$ 340,327		\$ 865,895		\$ 1,206,222
					9 340,327		9 803,833		1,200,222
6. MOR/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization								
	Some actor in contraction / Democratical	1			1				D 50 -5 (0

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supp	ly Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 12,062	\$ 12,062	\$ 12,062	\$ 12,062
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 74,449	\$ 74,449	\$ 74,449	\$ 74,449
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 12,062	\$ 12,062	\$ 12,062	\$ 12,062
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 12,062	\$ 12,062	\$ 12,062	\$ 12,062
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 60,311	\$ 60,311	\$ 60,311	\$ 60,311
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 3,619	\$ 3,619	\$ 3,619	\$ 3,619
6.7	Geotech	1	Location	\$	-	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 8,444	\$ 8,444	\$ 8,444	\$ 8,444
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$	-	\$ -	\$ 40,000	\$ -	\$ 40,000	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 3,619	\$ 3,619	\$ 3,619	\$ 3,619
6.13	Real Estate Costs (New ROW)	1	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	1	LS	\$		\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$	27,226	\$ 27,226	\$ -	\$ -	\$ 27,226	\$ 27,226
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 1,206	\$ 1,206	\$ 1,206	\$ 1,206
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 27,226		\$ 191,333		\$ 218,560

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NAT - NYPA - T029 - (Segment B) M. Interconnection Churchtown Station

Estimate	E		Total:	ċ	2,105,005	
Revision:	•		i Utai.	Ą	2,103,003	
	NAT - NYPA - T029 - (Segn	nent B)				
			Supply		Installation	Total
	M. Interconnection Churchtown Station					
	1. CLEARING & ACCESS	\$	-	\$	551,850	\$ 551,850
	2. FOUNDATIONS	\$	216,929	\$	319,252	\$ 536,181
	3. STRUCTURES	\$	336,926	\$	264,974	\$ 601,900
	4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$ -
	5. INSULATORS, FITTINGS, HARDWARE	\$	58,666	\$	27,354	\$ 86,020
	6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	49,002	\$	280,052	\$ 329,054
	CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$ -
	SUBTOTAL:	\$	661,523	\$	1,443,482	\$ 2,105,005
	CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$ -
	TOTAL:	\$	661,523	\$	1,443,482	\$ 2,105,005
Description	of Work:					

ltem	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rat	pply Rate Material Supply Cost		Labor & Equipment Supply Rate Cost		Total Unit Rate	TOTAL	
M. Inter	connection Churchtown Station										
1. CLEARING &	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -	
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000	
1.3	Access Road	-	LF	\$ -	\$	\$ -	\$ 45	\$ -	\$ 45	\$ -	
1.4	Silt Fence	3,500.0	LF	\$ -	\$	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000	
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000	
1.6	Matting - To Work Area	900.0	LF	\$ -	\$	\$ -	\$ 70	\$ 63,000	\$ 70	\$ 63,000	
1.7	Snow Removal	-	LS	\$ -	\$	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -	
1.8	ROW Restoration	0.5	Mile	\$ -	\$	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000	
1.9	Work Pads	60,000.0	SF	\$ -	\$	\$ -	\$ 4	\$ 211,200	\$ 4	\$ 211,200	
1.10	Restoration for Work Pad areas	12,000.0	SF	\$ -	\$	\$ -	\$ 0.2	\$ 1,800	\$ 0	\$ 1,800	
1.11	Temporary Access Bridge	-	EA	\$ -	\$	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -	
1.12	Air Bridge	-	EA	\$ -	\$	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -	
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -	
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -	
1.15	Gates	-	EA	\$ 2,00	00 \$	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -	
1.16	Culverts / Misc. Access	-	EA	\$ 75	50 \$	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -	
1.17	Concrete Washout Station	1	EA	\$ -	\$	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850	
1.18					\$	\$ -		\$ -		\$ -	
1.19					\$	\$ -		\$ -		\$ -	
1.20	Crushed Rock	0	CY	\$ 2	27 \$	\$ -	\$ 75	\$ -	\$ 102	\$ -	
TOTAL - CLEAR	ING & ACCESS				\$	\$ -		\$ 551,850		\$ 551,850	
2. FOUNDATIO	NS .										
2.1	1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	6	EA	\$ 18,07	77 \$	\$ 108,464	\$ 18,271	\$ 109,626	\$ 36,348	\$ 218,090	
2.2	2x 1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	6	EA	\$ 18,07	77 \$	\$ 108,464	\$ 18,271	\$ 109,626	\$ 36,348	\$ 218,090	
2.3	Rock Excavation Adder	50	СУ	\$ -	\$	\$ -	\$ 2,000	\$ 100,000	\$ 2,000	\$ 100,000	
2.4											
2.5											
2.6											
2.7											
2.8											
2.9											
2.10					\perp						
2.11					-						

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Estimate

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supp	ly Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.13											
2.14											
2.15 TOTAL - FOUN	IDATIONS				\$ 2:	16,929		\$ 319,252		\$	536,181
3. STRUCTURE					γ <u>Σ</u> .	10,323		3 313,232		۲	330,181
3.1	1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	2	Structure	\$ 82,71	\$ 10	65,427	\$ 49,628	\$ 99,256	\$ 132,342	\$	264,683
3.2	2x 1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	2	Structure	\$ 82,71		65,427		\$ 99,256			264,683
3.3	Install Grounding and Grounding Accessories	12	Pole	\$ 50	\$	6,072	\$ 5,539	\$ 66,462	\$ 6,045		72,534
3.4					\$	-		\$ -		\$	-
3.5											
3.5					+						
3.8											
3.9											
3.10											
3.11							<u> </u>				
3.12				1							
3.13											
3.14											
3.15											
TOTAL - STRU					\$ 3	36,926		\$ 264,974		\$	601,900
	DR, SHIELDWIRE, OPGW	_		4			4 5.00	ć	¢ 600	^	_
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571	-	LF LF		\$ \$	-	\$ 5.00 \$ 5.00		\$ 6.90 \$ 6.35		
4.3	(1) 3/8" EHS7 Steel	-	LF		7 \$		\$ 5.00		\$ 5.47		-
4.5	Remove Existing 115kV Cable From Existing Structures	-	Mile		\$		\$ 30,000	\$ -	\$ 30,000.00		-
4.6	Remove Existing OPGW Cable	-	Mile		\$		\$ 12,000	\$ -	\$ 12,000.00		-
4.7	Remove Existing EH7	-	Mile	\$ -	\$	-	\$ 12,000	\$ -	\$ 12,000.00	\$	-
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.9	\$	-	\$ 5.00	\$ -	\$ 6.90	\$	-
4.9		-			1.						
4.10	Rider Poles - Relocated Rider Poles	-	Set EA	\$ - \$ 1.75	\$	-	\$ 3,500 \$ 3,500	\$ - \$ -	\$ 3,500.00 \$ 5,250.00		-
4.11	UCTOR, SHIELDWIRE, OPGW:	-	EA	\$ 1,75	Ś	-	\$ 3,500	\$ -	\$ 5,250.00	\$	-
	R, FITTINGS, HARDWARE				7	-		, -		7	
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)		Assembly	\$ 1,80) \$	-	\$ 720	\$ -	\$ 2,520	\$	-
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 90	\$	-	\$ 560	\$ -	\$ 1,460		-
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	28	Assembly	\$ 1,80) \$!	50,400	\$ 720	\$ 20,160	\$ 2,520	\$	70,560
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 90	 	-	\$ 560	· .	\$ 1,460		-
5.5			Assembly		\$	-	4	\$ -	\$ -	\$	-
5.6 5.7	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	- 8	Assembly Assembly) \$) \$	2,000	\$ 150 \$ 150		\$ 350 \$ 400		3,200
5.8	OHSW Assembly - Tangent		Assembly) \$		\$ 150		\$ 350		- 3,200
5.9	OHSW Assembly - Angle / DE	8	Assembly) \$		\$ 150				3,200
5.10	OPGW Splice Boxes	1	Set	\$ 1,74		1,746	\$ 2,274				4,020
5.11	OPGW Splice & Test	1	EA	\$ 2,52		2,520	\$ 2,520				5,040
5.12	Spacer - Conductor	-	EA		\$	-	\$ 35		\$ 85		-
5.13	Vibration Dampers - Conductor	-	EA		\$		\$ 35		\$ 70	_	-
5.14 5.15	Shieldwire / OPGW Dampers, Misc. Fittings Guys, Anchors, and Accessories	-	EA EA		7 \$) \$	-	\$ 35 \$ 885	\$ - \$ -	\$ 62 \$ 1,605		-
5.16	Misc. materials (Signs and Markers)	-	Mile) \$	-	\$ 1,006	\$ -	\$ 1,776		-
5.17			ic	ļ , , , , , , , , , , , , , , , , , , ,	Ť		- 1,000	-	1,770	Ť	
5.18											
5.19					1.					ļ.,	
5.20					\$	-		\$ -		\$	-
	LATOR, FITTINGS, HARDWARE					58,666 12,521		\$ 27,354 \$ 1,163,430		\$	86,020 1,775,951
					9 0.	12,321		7 1,103,430		ې	1,773,351
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$ -	Ś	-	\$ 17,760	\$ 17,760	\$ 17,760	Ś	17,760
0.1	Project Management, Material Handling & Amenities	1	LJ		,	-	7 17,700	7 17,760	17,760	,	17,760
	, and a second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	-1							1		

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supp	oly Rate	Material Su	ipply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS					\$ 109,613	\$ 109,613	\$ 109,613	\$ 109,613
6.3	Utility PM and Project Oversite	1	LS			\$	-	\$ 17,760	\$ 17,760	\$ 17,760	\$ 17,760
6.4	Site Accommodation, Facilities, Storage	1	LS	\$		\$	-	\$ 17,760	\$ 17,760	\$ 17,760	\$ 17,760
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$	-	\$ 88,798	\$ 88,798	\$ 88,798	\$ 88,798
6.6	LiDAR	1	LS	\$	-	\$	-	\$ 5,328	\$ 5,328	\$ 5,328	\$ 5,328
6.7	Geotech	1	Location	\$	-	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$	-	\$ 12,432	\$ 12,432	\$ 12,432	\$ 12,432
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$	-	\$	-	\$ 40,000	\$ -	\$ 40,000	\$ -
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs		LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 5,328	\$ 5,328	\$ 5,328	\$ 5,328
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$	49,002	\$	49,002	\$ -	\$ -	\$ 49,002	\$ 49,002
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 1,776		\$ 1,776	\$ 1,776
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	49,002		\$ 280,052		\$ 329,054

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M. In. Churchtown SS

NAT - NYPA - T029 - (Segment B)

M. Interconnection Churchtown Station

Estimate Revision: 5 Total: \$ 2,165,267

NAT - NYPA - T029 - (Segm	ent B)			
		Supply	Installation	Total
M. Interconnection Churchtown Station				
1. CLEARING & ACCESS	\$	-	\$ 620,850	\$ 620,850
2. FOUNDATIONS	\$	16,088	\$ 415,395	\$ 431,483
3. STRUCTURES	\$	346,603	\$ 286,485	\$ 633,088
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	105,566	\$ 47,094	\$ 152,660
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	37,460	\$ 289,727	\$ 327,187
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	505,717	\$ 1,659,551	\$ 2,165,267
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	505,717	\$ 1,659,551	2,165,267

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			Nor	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	connection Churchtown Station								
1. CLEARING 8									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$ -	\$ 5,000			· 1
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	3,500.0	LF	\$ -	\$ -	\$ 4			\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	1,125.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000			\$ 5,000
1.9	Work Pads	75,000.0	SF	\$ -	\$ -	\$ 4	1 . ,		\$ 264,000
1.10	Restoration for Work Pad areas	15,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 2,250		\$ 2,250
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -			\$ 14,445	
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750		\$ 1,250		\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	СҮ	\$ 27	•	\$ 75		\$ 102	\$ -
	RING & ACCESS				\$ -		\$ 620,850		\$ 620,850
2. FOUNDATION	DNS								
2.1	1-CKT 115KV 3-POLE TANGENT DEADEND (0°-5°)	15	EA	\$ 1,073	\$ 16,088	\$ 7,293	\$ 109,395	\$ 8,366	\$ 125,483
2.5	Rock Excavation Adder	153	CY	\$ -	\$ -	\$ 2,000	\$ 306,000	\$ 2,000	\$ 306,000
2.3									
2.4									
2.5									
2.6									
2.7									
2.8									
2.9									
2.10									
2.11									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply R	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.12											
2.13										<u> </u>	
2.14					\dashv					├──	
TOTAL - FOUN	DATIONS					\$ 16,088		\$ 415,395		Ś	431,483
3. STRUCTURE						*************************************		Ų 123,033		-	152,105
3.1	1-CKT 115KV 3-POLE TANGENT DEADEND (0°-5°)	5	Structure	\$ 67,8	803	\$ 339,013	\$ 40,682	\$ 203,408	\$ 108,484	\$	542,420
3.2	Install Grounding and Grounding Accessories	15	Pole	\$!	506	\$ 7,590	\$ 5,539	\$ 83,078	\$ 6,045	\$	90,668
3.3					_					ــــــ	
3.4					\rightarrow					├	
3.6					\dashv					+	
3.7											
3.8											
3.9											
3.10					\dashv						
3.11					+					\vdash	
3.13					\dashv						
3.14											
3.15											
TOTAL - STRU						\$ 346,603		\$ 286,485		\$	633,088
	R, SHIELDWIRE, OPGW 345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1	.90	ċ	\$ 5.00	\$ -	\$ 6.90	\$	-
4.1	(1) OPGW 36 Fiber AC-33/38/571	-	LF LF		.35		\$ 5.00	\$ -	\$ 6.35		-
4.3	(1) 3/8" EHS7 Steel	-	LF).47		\$ 5.00	\$ -	\$ 5.47		-
4.5	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$	- :		\$ 30,000	\$ -	\$ 30,000.00	\$	-
4.6	Remove Existing OPGW Cable	-	Mile	\$	- 1	\$ -	\$ 12,000	\$ -	\$ 12,000.00		-
4.7	Remove Existing EH7	-	Mile	\$		\$ -	\$ 12,000	\$ -	\$ 12,000.00		-
4.8	115kV - (1) 795kcmil 26/7 ACSS "Drake"	-	LF	\$ 1	.72	\$ -	\$ 5.00	\$ -	\$ 6.72	\$	-
4.9 4.10	Rider Poles - Relocated	-	Set	\$	- 1	\$ -	\$ 3,500	\$ -	\$ 3,500.00	Ś	
4.11	Rider Poles	-	EA		750		\$ 3,500	т	\$ 5,250.00		
	UCTOR, SHIELDWIRE, OPGW:			·		\$ -	,	\$ -	,	\$	-
	, FITTINGS, HARDWARE										
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly		-	\$ -	\$ 720	\$ -	\$ 2,520		-
5.2 5.3	115kV Tangent (1-Group of 9-Bells Each Assembly) 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly Assembly		900	\$ - \$ -	\$ 560 \$ 720	\$ - \$ -	\$ 1,460 \$ 2,520		-
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	105	Assembly		900	т	\$ 360	\$ 37,800			132,300
5.5	225KV Seed end a vinge institutes (2 Group of 5 Sens Eden vissembly)	103	Assembly			\$ -	\$ 360		\$ 1,260		-
5.6	OPGW Assembly - Tangent	14	Assembly		200		\$ 150				4,900
5.7	OPGW Assembly - Angle / DE	1	Assembly		250		\$ 150				400
5.8 5.9	OHSW Assembly - Tangent	- 15	Assembly		200 : 250 :		\$ 150 \$ 150	\$ - \$ 2,250	\$ 350 \$ 400		6,000
5.10	OHSW Assembly - Angle / DE OPGW Splice Boxes	15	Assembly Set		746		\$ 2,274				4,020
5.11	OPGW Splice & Test	1	EA		520		\$ 2,520				5,040
5.12	Spacer - Conductor	-	EA	\$	50		\$ 35		\$ 85		
5.13	Vibration Dampers - Conductor	-	EA	\$	35		\$ 35	\$ -	\$ 70		-
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27		\$ 35	\$ -	\$ 62		-
5.15	Guys, Anchors, and Accessories	-	EA		720		\$ 885	\$ -	\$ 1,605		-
5.16	Misc. materials (Signs and Markers)	-	Mile	\$	770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$	
5.17 5.18					-						
5.19					- 1:	\$ -		\$ -		\$	-
5.20										Ė	
TOTAL - INSUL	ATOR, FITTINGS, HARDWARE					\$ 105,566		\$ 47,094		\$	152,660
M. Inter	connection Churchtown Station					\$ 468,256		\$ 1,369,824		\$	1,838,080
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	- :	\$ -	\$ 18,381	\$ 18,381	\$ 18,381	\$	18,381
	Project Management, Material Handling & Amenities									Щ_	

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 113,447	\$ 113,447	\$ 113,447	\$ 113,447
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 18,381	\$ 18,381	\$ 18,381	\$ 18,381
6.4	Site Accommodation, Facilities, Storage	1	LS	\$.	-	\$ -	\$ 18,381	\$ 18,381	\$ 18,381	\$ 18,381
	Engineering									
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 91,904	\$ 91,904	\$ 91,904	\$ 91,904
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 5,514	\$ 5,514	\$ 5,514	\$ 5,514
6.7	Geotech	1	Location	\$	-	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 12,867	\$ 12,867	\$ 12,867	\$ 12,867
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$	-	\$ -	\$ 40,000	\$ -	\$ 40,000	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 5,514	\$ 5,514	\$ 5,514	\$ 5,514
6.13	Real Estate Costs (New ROW)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 37,4	160	\$ 37,460		\$ -	\$ 37,460	\$ 37,460
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 1,838	\$ 1,838	\$ 1,838	\$ 1,838
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 37,460		\$ 289,727		\$ 327,187

Page 57 of 60 N. In. Pleasant Valley SS

NAT & NYPA - T029 - (Segment B)

O. System Upgrade Facilities (Middletown to Shoemakerrner line and Cricket Valley to Long Mt. Line)

Estimate Revision: Total: \$ 4,413,551

SYSTEM UPGF	SYSTEM UPGRADE FACILITIES		Unit of Measure	Materi	ial Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF 1	Transmission Line Upgrade Middletown to Shoemaker SS (0.88 Miles)									
1.1	138kV - (1) 1113kcmil 45/7 ACSS "Bluejay" Conductor	29,272.32	LF	\$	4.00	\$ 117,089	\$ 5.00	\$ 146,362	\$ 9	\$ 263,451
1.2	Remove Existing 1033.5kmil ACSR "Ortalon" Conductor and Accessories	0.88	Mile	\$	-	\$ -	\$ 30,000.00	\$ 26,400	\$ 30,000	\$ 26,400
1.3	Rider Poles	3.00	Sets	\$	1,750.00	\$ 5,250	\$ 3,500.00	\$ 10,500	\$ 5,250	\$ 15,750
1.4	138kV Vertical Tangent Insulator Assembly	18.00	Assembly	\$	900.00	\$ 16,200	\$ 560.00	\$ 10,080	\$ 1,460	\$ 26,280
1.5	138kV Deadend Insulator Assembly	30.00	Assembly	\$	900.00	\$ 27,000	\$ 560.00	\$ 16,800	\$ 1,460	\$ 43,800
	Subtotal SUF 1 Direct Cost					\$ 165,539		\$ 210,142		\$ 375,681
SUF 2	Transmission Line Upgrade Cricket Valley - Connecticut Border to Long Mountain (3.3 + 6.0 = 9.3 Miles)									
2.1	345kV - (1) 954kcmil 45/7 ACSS "Rail" Conductor (Cricket Vly to Conn Border)	109,771.20	LF	\$	2.50	\$ 274,428	\$ 5.00	\$ 548,856	\$ 8	\$ 823,284
2.2	345kV - (1) 2312kcmil 76/19 ACSS "Thrasher" Conductor (Conn Border to Long Mtn.)	99,792.00	LF	\$	8.00	\$ 798,336	\$ 5.00	\$ 498,960	\$ 13	\$ 1,297,296
2.3	Remove Existing 795 ACSS Conductor and Accessories (Cricket Vly to Conn Border)	3.30	Mile	\$	-	\$ -	\$ 30,000.00	\$ 99,000	\$ 30,000	\$ 99,000
2.4	Remove Existing 2156kmil ACSS Conductor and Accessories (Conn Border to Long Mtn.)	6.00	Mile	\$	-	\$ -	\$ 30,000.00	\$ 180,000	\$ 30,000	\$ 180,000
2.5	Rider Poles	10.00	Sets	\$	1,750.00	\$ 17,500	\$ 3,500.00	\$ 35,000	\$ 5,250	\$ 52,500
2.6	345kV Vertical Tangent Insulator Assembly	147.00	Assembly	\$	1,800.00	\$ 264,600	\$ 720.00	\$ 105,840	\$ 2,520	\$ 370,440
2.7	345kV Deadend Insulator Assembly	132.00	Assembly	\$	1,800.00	\$ 237,600	\$ 720.00	\$ 95,040	\$ 2,520	\$ 332,640
	Subtotal SUF 2 Direct Cost		·			\$ 1,592,464		\$ 1,562,696		\$ 3,155,160
	Total Direct Cost (SUF 1 + SUF 2)		•			\$ 1,758,003		\$ 1,772,838		\$ 3,530,841
3.0	Indirect Cost (25% of Direct Cost)					\$ 439,501		\$ 443,209		\$ 882,710
	TOTAL:					\$ 2,197,504		\$ 2,216,047		\$ 4,413,551

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NAT - NYPA - T029 - (Segment B)

System Upgrade Facilities (Various Stations for Knickerbocker to Pleasant Valley

Estimate Revision: 5 Total: \$ 14,049,000

SYSTEM UPGF	SYSTEM UPGRADE FACILITIES		Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF SS1	Middletown Tap Transformer Replacement	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 10,878,348	\$ 10,879,000
SUF SS1	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 360,000	\$ 360,000
SUF SS1	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 2,810,000
SUF SS1	SUF SS1 - TOTAL:				\$ -		\$ -		\$ 14,049,000
SUF SS2	Blank	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS2	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS2	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS2	SUFSS 2 - TOTAL:				\$ -		\$ -		\$ -
SUF SS3	Blank	1	LS					\$ -	\$ -
SUF SS3	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS3	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS3	SUF SS3 - TOTAL:				\$ -		\$ -		\$ -
SUF SS4		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS4	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS4	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS4	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
SUF SS5		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS5	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS5	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS5	SUF SS5 - TOTAL:				\$ -		\$ -		\$ -
	STATIONS SUF DIRECT TOTAL:								\$ 11,239,000
	STATIONS SUF INDIRECT TOTAL:								\$ 2,810,000
	STATIONS SUF TOTAL								\$ 14,049,000

	NAT - NYPA - T029 - (Segment B)
	ESTIMATE ASSUMPTIONS & CLARIFICATIONS
1	Cost Estimate is based on 2017 rates.
2	Construction schedule is in accordance with proposed schedule - we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
3	We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
4	All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
5	We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type. 20% of the total length of the line is assumed to use Type 1 Gravel road and 80% of the line length access to be used wood matting. In addition 75 feet of wood matting is included from the access matting to the work pad area matting. The estimate also include 5,000 square feet of wood matting for each structure work area within the ROW. For the ground restoration (seed, straw and woven mat), 20% of the work pad area included.
6	Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
7	Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
8	Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
9	A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
10	We have assumed that all project details provided are accurate unless noted otherwise.
11	Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
12	A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
13	A contractor allowance of 5.367% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
14	An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
15	A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
16	An allowance of 5% for transmission design and engineering has been included in the total section.
17	An allowance of 8% for substation design and engineering has been included in the total section.
18	An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
19	An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
20	An allowance of 3.75% for substation testing and commissioning has been included in the total section.
21	An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
22	New York state sales tax of 8% is included in all material pricing.
23	An allowance of 1.5% for insurance is included in the DPS sheet.
24	Knickerbocker to Churchtown substation; 0.4 miles of 345kV conductor from the junction have been added.
25	An additional Quantity of 5% have been added to conductors, OPGW, & OHSW for sag and jumpers.
26	Rock excavation depth in Foundation data provided in the proposal.
	Middletown to Shoemaker Line upgrade: The length of the line segment is 0.88 miles
27	-The re-conductor will remove the existing 2 bundle 1033.5 ACSR conductor and install new 2 bundle Bluejay 1113 ACSS conductor
27	-The Insulators and associated conductor hardware will be replaced The opinion of the base and associated conductor hardware will be replaced.
	-The existing structures are assumed to have adequate strength to support the new conductors
	-The estimate is a rough order of magnitude estimate as no engineering was performed and SECo did not have access to record drawings. Cricket Valley to Long Mountain line upgrade: The length of the re-conductor between Cricket Valley and the NY/CT border is 3.3 miles and will remove the existing (to be installed on CV
	project) 2 bundle 795 ACSS conductor and install new 2 bundle Rail 954 ACSS conductor.
	-The length of the re-conductor between the NY/CT border and Long Mountain is 6 miles and will remove the existing single 2156 ACSS conductor and install new single Thrasher 2312
28	ACSS conductor.
20	-The Insulators and associated conductor hardware will be replaced.
	-The existing structures are assumed to have adequate strength to support the new conductors.
	-The estimate is a rough order of magnitude estimate as no engineering was performed and SECo did not have access to record drawings.
29	The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.
	10. I I I I I I I I I I I I I I I I I I I



	NY Power Authority and North American Transmission (T030)									
		Description	Total Amount (In thousand \$)							
	1	Transmission Lines								
[1.1	Clearing & Access	\$34,378							
	1.2	Foundations	\$18,131							
	1.3	Structures	\$56,775							
	1.4	Conductor, Shiedwire and OPGW	\$35,969							
	1.5	Insulators, Fitting and Hardwares	\$11,553							
l i		Subtotal (1)	\$156,807							
ا پر ا	2	Substations								
Direct Cost	2.1	Knickerbocker Substation	\$14,982							
rect	2.2	East Greenbush Substation	\$61							
□□	2.3	Schodack Substation	\$2,226							
	2.4	Churchtown Substation	\$16,010							
	2.5	Pleasant Valley Substation	\$2,778							
	2.6	Substation Interconnections	\$6,312							
l i		Subtotal (2)	\$42,369							
l i		Total (1+2)	\$199,176							
		Contractors Mark-up (15% of Total 1+2)	\$29,876							
l i		Total Direct Cost (A)	\$229,052							
	3	Technical Services Costs								
l İ	3.1	Contractor Mobilization / Demobilization	\$1,992							
st	3.2	Project Management, Material Handling & Amenities	\$15,576							
C	3.3	Engineering	\$13,164							
Indirect Cost	3.4	Testing & Commissioning	\$972							
l lu	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$14,389							
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628							
		Total Indirect Cost (3)	\$53,721							
		Subtotal Project Cost (B=A+3) 2017 \$	\$282,773							
	4	Network Upgrade Facilities (NUF)								
[4.1	NUF proposed as element of the Project (Middletown Line and Terminal)	\$16,261							
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417							
•		Subtotal NUF Cost (C)	\$20,678							
		Total Project Cost (B+C) 2017 \$	\$303,451							
		Total Project Cost 2018 \$	\$312,555							

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NAT - NYPA - T030 - (Segment B Enhanced)

Estimate Revision: 5

	NAT - NYPA - T030 - (Segment B Enhanced) - Direct Costs	Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Knickerbocker to Churchtown	\$ 57,825,407
Direct Labor, Material & Equipment Costs	B. Transmission Line Churchtown to Pleasant Valley	\$ 94,235,274
Direct Labor, Material & Equipment Costs	C. Blue Stores Junction to Blue Stores Substation	\$ 4,746,361
Direct Labor, Material & Equipment Costs	D. Knickerbocker 345kV Substation - Install	\$ 14,982,000
Direct Labor, Material & Equipment Costs	E. Greenbush Substation - Removal	\$ 61,200
Direct Labor, Material & Equipment Costs	F. Schodack Substation - Install	\$ 2,089,357
Direct Labor, Material & Equipment Costs	G. Schodack Substation - Removal	\$ 136,200
Direct Labor, Material & Equipment Costs	H. Churchtown Substation - Install	\$ 15,046,621
Direct Labor, Material & Equipment Costs	I.Churchtown Substation - Removal	\$ 963,678
Direct Labor, Material & Equipment Costs	J. Pleasant Valley Substation - Install	\$ 2,777,841
Direct Labor, Material & Equipment Costs	K. Interconnection Milan Station	\$ 623,428
Direct Labor, Material & Equipment Costs	L. Interconnection Knickerbocker Station	\$ 1,262,237
Direct Labor, Material & Equipment Costs	M. Interconnection Churchtown Station	\$ 2,142,195
Direct Labor, Material & Equipment Costs	N. Interconnection Pleasant Valley Station	\$ 2,284,222
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Middletown Tap and Cricket Valley Line Upgrade)	\$ 3,530,841
Direct Labor, Material & Equipment Costs	P. System Upgrade Facilities (Middletown Substation)	\$ 11,239,000
	SUBTOTAL:	\$ 213,945,861
	CONTRACTOR MARK-UP (OH&P)	\$ 32,091,879
	CONTINGENCY ON ENTIRE PROJECT	\$ -
	TOTAL DIRECT:	\$ 246,037,741

	NAT - NYPA - T030 - (Segment B Enhanced) - Indirect Costs		Total Each Segment
Indirect Costs	A. Transmission Line Knickerbocker to Churchtown	\$	13,461,432
Indirect Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	21,467,279
Indirect Costs	C. Blue Stores Junction to Blue Stores Substation	\$	984,454
Indirect Costs	D. Knickerbocker 345kV Substation - Install	\$	3,909,529
Indirect Costs	E. Greenbush Substation - Removal	\$	10,478
Indirect Costs	F. Schodack Substation - Install	\$	508,425
Indirect Costs	G. Schodack Substation - Removal	\$	23,318
Indirect Costs	H. Churchtown Substation - Install	\$	3,712,994
Indirect Costs	I.Churchtown Substation - Removal	\$	164,983
Indirect Costs	J. Pleasant Valley Substation - Install	\$	712,299
Indirect Costs	K. Interconnection Milan Station	\$	119,179
Indirect Costs	L. Interconnection Knickerbocker Station	\$	225,130
Indirect Costs	M. Interconnection Churchtown Station	\$	397,868
Indirect Costs	N. Interconnection Pleasant Valley Station	\$	395,636
Indirect Costs	O. System Upgrade Facilities (Middletown and Cricket Valley Line Upgrade)	\$	882,710
Indirect Costs	P. System Upgrade Facilities (Middletown Substation)	\$	2,810,000
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitigation)	\$	7,627,609
	TOTAL INDIRE	CT: \$	57,413,321

TOTAL ESTIMATED COST: \$ 303,451,061

A. Transmission Line Knickerbocker to Churchtown

NAT - NYPA - T030 - (Segment B Enhanced)

Estimate Revision: Total: \$ 71,286,839

NAT - NYPA - T030 - (Se	gment B En	hanced)				
		Supply			Total	
A. Transmission Line Knickerbocker to Churchtown						
1. CLEARING & ACCESS	\$	11,500	\$	13,264,953	\$	13,276,453
2. FOUNDATIONS	\$	1,216,320	\$	5,964,195	\$	7,180,515
3. STRUCTURES	\$	8,858,578	\$	10,543,966	\$	19,402,544
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	2,905,216	\$	10,613,935	\$	13,519,151
5. INSULATORS, FITTINGS, HARDWARE	\$	2,937,361	\$	1,509,383	\$	4,446,745
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,274,318	\$	12,187,114	\$	13,461,432
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	17,203,293	\$	54,083,546	\$	71,286,839
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	17.203.293	Ś	54.083.546	Ś	71.286.839

Description of Work:

		Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	T	OTAL
A. Transm	ission Line Knickerbocker to Churchtown									
1. CLEARING & AC	CCESS									
1.1 Cle	learing the ROW - Heavy (mowing & clearing)	19	Acre		\$ -	\$ 15,000	\$ 285,000	\$ 15,000	\$	285,000
1.2 Cle	learing the ROW - Light (mowing)	63	Acre		\$ -	\$ 5,000	\$ 315,000	\$ 5,000	\$	315,000
	ermanent Access Road	23,126	LF		\$ -	\$ 45.00				1,040,688
	ilt Fence	115,632	LF		\$ -		\$ 462,528		\$	462,528
	Matting - Access and ROW	92,506	LF		\$ -	\$ 70.00			-	6,475,392
	Matting - To Work Area	12,075	LF.		\$ -	\$ 70.00				845,250
	now Removal	21.9	Mile Mile		\$ -	,	\$ 350,400 \$ 219,000			350,400
	OW Restoration Vork Pads	21.9 805,000	SF		\$ -	\$ 10,000 \$ 3.52			\$	219,000 2,833,600
	estoration for Work Pad areas	161,000	SF		\$ -	\$ 0.15	\$ 24,150		Ś	24,150
	emporary Access Bridge	9	EA		\$ -	\$ 20,035	\$ 180,315			180,315
	ir Bridge	-	EA		\$ -	\$ 14,445	\$ -	\$ 14,445		-
	tabilized Construction Entrance	4	EA		\$ -	\$ 4,580	\$ 18,320			18.320
1.14 M	Naintenance and Protection of Traffic on Public Roads	47	EA		\$ -	\$ 4,130	\$ 194,110	\$ 4,130	\$	194,110
1.15 Cu	ulverts / Misc. Access	10	EA	\$ 750	\$ 7,500	\$ 1,250	\$ 12,500	\$ 2,000	\$	20,000
1.16 Ga	ates	2	EA	\$ 2,000	\$ 4,000	\$ 2,500	\$ 5,000	\$ 4,500	\$	9,000
	oncrete Washout Station	2	EA		\$ -	\$ 1,850	\$ 3,700	\$ 1,850	\$	3,700
TOTAL - CLEARING	IG & ACCESS:				\$ 11,500		\$ 13,264,953		\$	13,276,453
2. FOUNDATIONS	S									
2.1 1-	-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	1	EA	\$ 3,575	\$ 3,575	\$ 24,310		-	\$	27,885
2.2 1-	-CKT 345KV VERTICAL TANGENT (0°-1°)	1	EA	\$ 2,888	\$ 2,888	\$ 19,635	\$ 19,635	\$ 22,523	\$	22,523
2.3 2-	-CKT 115KV/345KV DELTA SMALL ANGLE (1°-15°)	7	EA	\$ 3,713	\$ 25,988	\$ 25,245	\$ 176,715	\$ 28,958	\$	202,703
2.4 2-	-CKT 115KV/345KV DELTA TANGENT (0°-1°)	129	EA	\$ 2,750	\$ 354,750	\$ 18,700	\$ 2,412,300	\$ 21,450	\$	2,767,050
2.5 2-	-CKT 115KV/345KV DELTA TANGENT (0°-1°) HD	3	EA	\$ 2,888	\$ 8,663	\$ 19,635	\$ 58,905	\$ 22,523	\$	67,568
2.6 2-	-CKT 115KV/345KV DELTA TANGENT DEADEND (0°-5°)	10	EA	\$ 3,163	\$ 31,625	\$ 21,505	\$ 215,050	\$ 24,668	\$	246,675
2.7 1-	-CKT 345KV VERTICAL LARGE ANGLE DEADEND (60°-90°)	1	EA	\$ 118,325	\$ 118,325	\$ 119,592	\$ 119,592	\$ 237,917	\$	237,917
2.8 1-	-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	1	EA	\$ 92,030	\$ 92,030	\$ 93,016	\$ 93,016	\$ 185,046	\$	185,046
	-CKT 115KV/345KV DELTA MEDIUM ANGLE DEADEND (15°-60°)	8	EA	\$ 72,310	\$ 578,477	\$ 73,084	\$ 584,672	\$ 145,394	\$	1,163,149
2.10										
2.11										
2.12										
2.13 Ro	ock Excavation Adder	1,130.0	CY	\$ -	\$ -	\$ 2,000	\$ 2,260,000	\$ 2,000	\$	2,260,000
2.14										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
2.15									
2.16									
2.17									
2.18									
TOTAL - FOUND	DATIONS:				\$ 1,216,320		\$ 5,964,195		\$ 7,180,515
3. STRUCTURES									
3.1	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	1	Structure	\$ 115,897	\$ 115,897	\$ 69,538	\$ 69,538	\$ 185,435	\$ 185,435
3.2	1-CKT 345KV VERTICAL TANGENT (0°-1°)	1	Structure	\$ 56,203	\$ 56,203	\$ 33,722	\$ 33,722	\$ 89,925	\$ 89,925
3.3	2-CKT 115KV/345KV DELTA SMALL ANGLE (1°-15°)	7	Structure	\$ 82,929	\$ 580,502	\$ 49,757	\$ 348,301	\$ 132,686	\$ 928,804
3.4	2-CKT 115KV/345KV DELTA TANGENT (0°-1°)	129	Structure	\$ 43,936	\$ 5,667,734	\$ 26,362	\$ 3,400,640	\$ 70,297	\$ 9,068,374
3.5	2-CKT 115KV/345KV DELTA TANGENT (0°-1°) HD	3	Structure	\$ 60,948	\$ 182,845	\$ 36,569	\$ 109,707	\$ 97,517	\$ 292,552
3.6	2-CKT 115KV/345KV DELTA TANGENT DEADEND (0°-5°)	10	Structure	\$ 64,662	\$ 646,619	\$ 38,797	\$ 387,972	\$ 103,459	\$ 1,034,591
3.7	1-CKT 345KV VERTICAL LARGE ANGLE DEADEND (60°-90°)	1	Structure	\$ 269,373	\$ 269,373	\$ 161,624	\$ 161,624	\$ 430,997	\$ 430,997
3.8	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	1	Structure	\$ 130,695	\$ 130,695	\$ 78,417	\$ 78,417	\$ 209,112	\$ 209,112
3.9	2-CKT 115KV/345KV DELTA MEDIUM ANGLE DEADEND (15°-60°)	8	Structure	\$ 140,905	\$ 1,127,244	\$ 84,543	\$ 676,346	\$ 225,449	\$ 1,803,590
3.10									
3.11									
3.12	Remove Existing Foundation	688	EA	\$ -	\$ -	\$ 3,250	\$ 2,236,000	\$ 3,250	\$ 2,236,000
3.13	Remove Existing Structure and Accessories	172	EA	\$ -	\$ -	\$ 12,500	\$ 2,150,000	\$ 12,500	\$ 2,150,000
3.14	Install Grounding and Grounding Accessories	161	Pole	\$ 506	\$ 81,466	\$ 5,539	\$ 891,699	\$ 6,045	\$ 973,165
3.15									
TOTAL - STRUC	TURES:				\$ 8,858,578		\$ 10,543,966		\$ 19,402,544
4. CONDUCTOR	R, SHIELDWIRE, OPGW								
4.1	345kV - (1) 477kcmil 26/7 ACSS "Hawk"	1,112,681	LF	\$ 1.75	\$ 1,947,192	\$ 5.00	\$ 5,563,405	\$ 6.75	\$ 7,510,597
4.2	(1) OPGW 36 Fiber AC-33/38/571	123,631	LF	\$ 1.35	\$ 166,902	\$ 5.00	\$ 618,155	\$ 6.35	\$ 785,057
4.3	(1) 3/8" EHS7 Steel	121,414	LF	\$ 0.47	\$ 57,065	\$ 5.00	\$ 607,070	\$ 5.47	\$ 664,135
4.4	Remove Existing 115kV Cable From Existing Structures	43.8	Mile	\$ -	\$ -	\$ 30,000	\$ 1,314,000	\$ 30,000.00	\$ 1,314,000
4.5	Remove Existing OPGW Cable and Accessories	21.9	Mile	\$ -	\$ -	\$ 12,000	\$ 262,800	\$ 12,000.00	\$ 262,800
4.6	Remove Existing OHSW and Accessories	21.9	Mile	\$ -	\$ -	\$ 12,000	\$ 262,800	\$ 12,000.00	\$ 262,800
4.7	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	364,241	LF	\$ 1.90	\$ 692,058	\$ 5.00	\$ 1,821,205	\$ 6.90	\$ 2,513,263
4.8	Rider Poles (47 Locations)	24	Set	\$ 1,750	\$ 42,000	\$ 3,500	\$ 84,000	\$ 5,250.00	\$ 126,000
4.9	Rider Poles - Relocated	23	Set	\$ -	\$ -	\$ 3,500	\$ 80,500	\$ 3,500.00	\$ 80,500
4.10									
4.11									
4.12									
4.13									
4.14									
4.15									•
4.16									
4.17									
TOTAL: CONDU	ICTOR, SHIELDWIRE, OPGW:				\$ 2,905,216		\$ 10,613,935		\$ 13,519,151
	FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	705	Assembly	\$ 1,800	\$ 1,269,000	\$ 720	\$ 507,600	\$ 2,520	\$ 1,776,600
	115kV Tangent (1-Group of 9-Bells Each Assembly)	695	Assembly	\$ 900	\$ 625,500	\$ 560	\$ 389,200	\$ 1,460	\$ 1,014,700
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	300	Assembly	\$ 1,800	\$ 540,000	\$ 720	\$ 216,000	\$ 2,520	\$ 756,000
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	126	Assembly	\$ 900			\$ 70,560	\$ 1,460	\$ 183,960
5.5	•		Assembly	\$ 900				\$ 1,260	\$ -
	OPGW Assembly - Tangent	141	Assembly	\$ 200					49,350
	OPGW Assembly - Angle / DE	40	Assembly	\$ 250					 16,000
	OHSW Assembly - Tangent	139	Assembly	\$ 200				\$ 350	 48,650
-	OHSW Assembly - Angle / DE	36	Assembly	\$ 250					14,400
	OPGW Splice Boxes	8	Set	\$ 1,746					32,161

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate		TOTAL
5.12	Spacer - Conductor	3,651	EA	\$ 50	\$ 182,550	\$ 35	\$ 127,785	\$ 85	\$	310,335
5.13	Vibration Dampers - Conductor	1,971	EA	\$ 35	\$ 68,985	\$ 35	\$ 68,985	\$ 70	\$	137,970
5.14	Shield wire / OPGW Dampers, Misc. Fittings	442	EA	\$ 27	\$ 11,934	\$ 35	\$ 15,470	\$ 62	\$	27,404
5.15										
5.16	Replace - Mono Pole Vertical Tangent - V-String	-	Set	\$ 1,800	\$ -	\$ 1,080	\$ -	\$ 2,880		-
5.17	Replace - Dead-end & Angle Insulators	-	Set	\$ 2,540	\$ -	\$ 2,025	\$ -	\$ 4,565	\$	-
5.18									ــــــ	
5.19	Guys, Anchors, and Accessories	-	EA	\$ 720		\$ 885		\$ 1,605	<u> </u>	-
5.20	Misc. materials (Signs and Markers)	21.9	Mile	\$ 770	\$ 16,863	\$ 1,006	\$ 22,031	\$ 1,776	_	38,894
5.21		-		\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
5.22									—	
5.23									 	
	ATORS, FITTINGS, HARDWARE:				\$ 2,937,361		\$ 1,509,383		\$	4,446,745
A. Transı	mission Line Knickerbocker to Churchtown				\$ 15,928,975		\$ 41,896,432		\$	57,825,407
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:									
	Contractor Mobilization / Demobilization									
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 578,254	\$ 578,254	\$ 578,254	\$	578,254
	Project Management, Material Handling & Amenities									
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 3,365,525	\$ 3,365,525	\$ 3,365,525	\$	3,365,525
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 578,254	\$ 578,254	\$ 578,254	\$	578,254
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 578,254	\$ 578,254	\$ 578,254	\$	578,254
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 2,891,270	\$ 2,891,270	\$ 2,891,270	\$	2,891,270
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 173,476	\$ 173,476	\$ 173,476	\$	173,476
6.7	Geotech	22	Location	\$ -	\$ -	\$ 3,500	\$ 77,000	\$ 3,500	\$	77,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 404,778	\$ 404,778	\$ 404,778	\$	404,778
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 173,476	\$ 173,476	\$ 173,476	\$	173,476
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 3,269,000	\$ 3,269,000	\$ 3,269,000	\$	3,269,000
6.15	Legal Fees	•	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$ 1,274,318	\$ 1,274,318	\$ -	\$ -	\$ 1,274,318	\$	1,274,318
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 57,825	\$ 57,825	\$ 57,825	\$	57,825
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 1,274,318		\$ 12,187,114		\$	13,461,432

NAT - NYPA - T030 - (Segment B Enhanced)

B. Transmission Line Churchtown to Pleasant Valley

Estimate Revision: 5 Total: \$ 115,702,553

NAT - NYPA - T030 - (Segment B Enh	anced)		
		Supply	Installation	Total
B. Transmission Line Churchtown to Pleasant Valley				
1. CLEARING & ACCESS	\$	14,000	\$ 19,683,466	\$ 19,697,466
2. FOUNDATIONS	\$	830,338	\$ 8,957,307	\$ 9,787,645
3. STRUCTURES	\$	13,291,751	\$ 22,537,866	\$ 35,829,617
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	4,293,840	\$ 17,684,415	\$ 21,978,255
5. INSULATORS, FITTINGS, HARDWARE	\$	4,595,434	\$ 2,346,857	\$ 6,942,291
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	1,842,029	\$ 19,625,250	\$ 21,467,279
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	24,867,392	\$ 90,835,161	\$ 115,702,553
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	24,867,392	\$ 90,835,161	\$ 115,702,553

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Transı	mission Line Churchtown to Pleasant Valley								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	15.0	Acre	\$ -	\$ -	\$ 15,000	\$ 225,000	\$ 15,000	\$ 225,000
1.2	Clearing the ROW - Light (mowing)	102.0	Acre	\$ -	\$ -	\$ 5,000		\$ 5,000	1
1.3	Permanent Access Road	34,109	LF	\$ -	\$ -	\$ 45		\$ 45	
1.4	Silt Fence	170,544.0	LF	\$ -	\$ -	'	\$ 682,176		\$ 682,176
	Matting - Access and ROW	136,435	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	18,300.0	LF	\$ -	\$ -	\$ 70		\$ 70	
1.7	Snow Removal	32.3	Mile	\$ -	\$ -	\$ 16,000		\$ 16,000	\$ 516,800
1.8	ROW Restoration	32.3	Mile	\$ -	\$ -	\$ 10,000		\$ 10,000	
1.9	Work Pads	1,220,000.0	SF	\$ -	\$ -	'	\$ 4,294,400	,	\$ 4,294,400
1.10	Restoration for Work Pad areas	244,000.0	SF	\$ -	\$ -	\$ 0.2			\$ 36,600
1.11	Temporary Access Bridge	14	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	12	EA	\$ -	\$ -	\$ 4,580		\$ 4,580	
1.14	Maintenance and Protection of Traffic on Public Roads	86	EA	\$ - \$ 2.000	\$ -	\$ 4,130		\$ 4,130 \$ 4,500	
1.15	Gates	<u>4</u> 8	EA	7 -/					
1.16	Culverts / Misc. Access Concrete Washout Station	10	EA EA	\$ 750 \$ -		\$ 1,250 \$ 1,850		\$ 2,000 \$ 1,850	
1.17	ING & ACCESS:	10	EA	\$ -	\$ - \$ 14,000	\$ 1,850	\$ 18,500 \$ 19,683,466	\$ 1,850	\$ 18,500 \$ 19,697,466
2. FOUNDATIO					\$ 14,000		\$ 19,083,400		\$ 19,097,400
Z. FOUNDATIO	N3								
2.1	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	1	EA	\$ 3,575	\$ 3,575	\$ 24,310	\$ 24,310	\$ 27,885	\$ 27,885
2.2	1-CKT 345KV VERTICAL TANGENT (0°-1°)	1	EA	\$ 2,063	\$ 2,063	\$ 14,025	\$ 14,025	\$ 16,088	\$ 16,088
2.3	2-CKT 115KV/345KV DELTA SMALL ANGLE (1°-15°)	14	EA	\$ 3,163	\$ 44,275	\$ 21,505	\$ 301,070	\$ 24,668	\$ 345,345
2.4	2-CKT 115KV/345KV DELTA TANGENT (0°-1°)	187	EA	\$ 1,925	\$ 359,975	\$ 13,090	\$ 2,447,830	\$ 15,015	\$ 2,807,805
2.5	2-CKT 115KV/345KV DELTA TANGENT (0°-1°) HD	4	EA	\$ 2,063	\$ 8,250	\$ 14,025	\$ 56,100	\$ 16,088	\$ 64,350
2.6	2-CKT 115KV/345KV DELTA TANGENT DEADEND (0°-5°)	29	EA	\$ 2,200	\$ 63,800	\$ 14,960	\$ 433,840	\$ 17,160	\$ 497,640
2.7	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	1	EA	\$ 32,046	\$ 32,046	\$ 32,390	\$ 32,390	\$ 64,436	\$ 64,436
2.8	2-CKT 115KV/345KV DELTA MEDIUM ANGLE DEADEND (15°-60°)	7	EA	\$ 45,194	\$ 316,355	\$ 45,678	\$ 319,743	\$ 90,871	\$ 636,097

Item	Item Description	Estimated Quantity	Unit of Measure	Mat	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.9 R	Rock Excavation Adder	2,664.0	CY	\$	-	\$ -	\$ 2,000	\$ 5,328,000	\$ 2,000	\$ 5,328,000
2.10										
2.11										
2.12										
TOTAL - FOUNDA	PATIONS:					\$ 830,338		\$ 8,957,307		\$ 9,787,645
3. STRUCTURES										
3.1 1	1-CKT 345KV VERTICAL SMALL ANGLE (1°-15°)	1	Structure	\$	115,897	\$ 115,897	\$ 69,538			\$ 185,435
3.2 1	1-CKT 345KV VERTICAL TANGENT (0°-1°)	1	Structure	\$	82,122	\$ 82,122	\$ 49,273	\$ 49,273	\$ 131,394	\$ 131,394
3.3 2	2-CKT 115KV/345KV DELTA SMALL ANGLE (1°-15°)	14	Structure	\$	88,655	\$ 1,241,174	\$ 53,193	\$ 744,705	\$ 141,848	\$ 1,985,879
3.4 2	2-CKT 115KV/345KV DELTA TANGENT (0°-1°)	187	Structure	\$	44,674	\$ 8,354,097	\$ 26,805	\$ 5,012,458	\$ 71,479	\$ 13,366,555
3.5 2	2-CKT 115KV/345KV DELTA TANGENT (0°-1°) HD	4	Structure	\$	57,554	\$ 230,214	\$ 34,532	\$ 138,128	\$ 92,086	\$ 368,342
3.6 2	2-CKT 115KV/345KV DELTA TANGENT DEADEND (0°-5°)	29	Structure	\$	67,219	\$ 1,949,354	\$ 40,331	\$ 1,169,613	\$ 107,551	\$ 3,118,967
3.7 1	1-CKT 345KV VERTICAL MEDIUM ANGLE DEADEND (15°-60°)	1	Structure	\$	143,312	\$ 143,312	\$ 85,987	\$ 85,987	\$ 229,299	\$ 229,299
3.8 2	2-CKT 115KV/345KV DELTA MEDIUM ANGLE DEADEND (15°-60°)	7	Structure	\$	150,302	\$ 1,052,117	\$ 90,181	\$ 631,270	\$ 240,484	\$ 1,683,388
3.9 R	Remove Existing Foundation	2,084	EA	\$	-	\$ -	\$ 3,250	\$ 6,773,000	\$ 3,250	\$ 6,773,000
3.10 R	Remove Existing Structure and Accessories	521	EA	\$	-	\$ -	\$ 12,500	\$ 6,512,500	\$ 12,500	\$ 6,512,500
3.11	Ÿ						1	1		
3.12 lı	Install Grounding and Grounding Accessories	244	Pole	\$	506	\$ 123,464	\$ 5,539	\$ 1,351,394	\$ 6,045	\$ 1,474,858
3.13										
3.14										
3.15				_						
3.16										
3.17	TURES PRINCTOWN TO NEW SCOTLAND:					\$ 13,291,751		\$ 22,537,866		\$ 35,829,617
	, SHIELDWIRE, OPGW					3 13,291,731		\$ 22,337,800		3 33,023,017
	345kV - (1) 477kcmil 26/7 ACSS "Hawk"	1,631,599	LF	\$	1.75	\$ 2,855,298	\$ 5.00	\$ 8,157,995	\$ 6.75	\$ 11,013,293
4.2	(1) OPGW 36 Fiber AC-33/38/571	181,289	LF	\$	1.35					\$ 1,151,185
4.3	(1) 3/8" EHS7 Steel	181,289	LF	\$		\$ 85,206				\$ 991,651
	Remove Existing 115kV Cable From Existing Structures	130.4	Mile	\$		\$ -	\$ 30,000			\$ 3,912,000
4.6	Remove Existing OPGW Cable and Accessories	32.6	Mile	\$		\$ - \$ -	\$ 12,000 \$ 12,000			\$ 390,600
4.7	Remove Existing OHSW and Accessories	32.6 543,866	Mile LF	\$		\$ -	7,			\$ 390,600 \$ 3,752,675
4.8 1 4.9	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	343,800	LF	>	1.90	\$ 1,055,545	\$ 5.00	2,/19,530	\$ 6.90	\$ 3,752,075
	Rider Poles - Relocated	43	Set	Ś	-	\$ -	\$ 3,500	\$ 150,500	\$ 3,500.00	\$ 150,500
	Rider Poles (86 Total)	43	EA	Ś	1,750	•				\$ 225,750
	CTOR, SHIELDWIRE, OPGW:					\$ 4,293,840		\$ 17,684,415		\$ 21,978,255
5. INSULATOR, F	FITTINGS, HARDWARE									
	345kV Tangent (1-Group of 18-Bells Each Assembly)	1,035	Assembly	\$,	\$ 1,863,000				\$ 2,608,200
	115kV Tangent (1-Group of 9-Bells Each Assembly)	1,025	Assembly	\$		\$ 922,500				\$ 1,496,500
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	555	Assembly	\$		\$ 999,000				\$ 1,398,600
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	252	Assembly	\$	900	\$ 226,800				\$ 367,920
5.5	ODCW Assamble Tangant	207	Assembly	,	200	•	\$ 360	+	\$ 360	\$ -
	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	207 74	Assembly Assembly	\$	200 250			\$ 31,050 \$ 11,100		\$ 72,450 \$ 29,600
	OHSW Assembly - Tangent	205	Assembly	\$	200			\$ 30,750		\$ 71,750
	OHSW Assembly - Tangent OHSW Assembly - Angle / DE	72	Assembly	\$		\$ 18,000		+		\$ 28,800
	OPGW Splice Boxes	12	Set	\$	1,746					\$ 48,242
	OPGW Splice & Test	12	EA	\$		\$ 30,240				\$ 60,480
	Spacer - Conductor	5,414	EA	\$	50			\$ 189,490		\$ 460,190
5.12 S										
	Vibration Dampers - Conductor	2,878	EA	\$	35			\$ 100,730		\$ 201,460

Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
5.14	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	\$	-
5.15	Misc. materials (Signs and Markers)	32.3	Mile	\$	770	\$ 24,871	\$ 1,006	\$ 32,494	\$ 1,776	\$	57,365
TOTAL - INSUI	ATORS, FITTINGS, HARDWARE:					\$ 4,595,434		\$ 2,346,857		\$	6,942,291
B. Trans	mission Line Churchtown to Pleasant Valley					\$ 23,025,363		\$ 71,209,911		\$	94,235,274
6. MOB/DEM	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$	-	\$ -	\$ 942,353	\$ 942,353	\$ 942,353	\$	942,353
	Project Management, Material Handling & Amenities									↓	
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 5,484,634	\$ 5,484,634	\$ 5,484,634	\$	5,484,634
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 942,353	\$ 942,353	\$ 942,353	\$	942,353
6.4	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 942,353	\$ 942,353	\$ 942,353	\$	942,353
	Engineering										
6.5	Design Engineering	1	LS	\$	-	\$ -	\$ 4,711,764	\$ 4,711,764	\$ 4,711,764	\$	4,711,764
6.6	LiDAR	1	LS	\$	-	\$ -	\$ 282,706	\$ 282,706	\$ 282,706	\$	282,706
6.7	Geotech	33	Location	\$	-	\$ -	\$ 3,500	\$ 115,500	\$ 3,500	\$	115,500
6.8	Surveying/Staking	1	LS	\$	-	\$ -	\$ 659,647	\$ 659,647	\$ 659,647	\$	659,647
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 282,706		\$ 282,706		282,706
6.13	Real Estate Costs (New ROW)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$	-	\$ -	\$ 5,127,000		\$ 5,127,000	+ -	5,127,000
6.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$	1,842,029	\$ 1,842,029		\$ -	\$ 1,842,029		1,842,029
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 94,235		\$ 94,235	-	94,235
TOTAL - MOB,	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 1,842,029		\$ 19,625,250		\$	21,467,279

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NAT - NYPA - T030 - (Segment B Enhanced)

C. Blue Stores Junction to Blue Stores Substation

Estimate Revision: 5 Total: \$ 5,730,815

NAT - NYPA - T030 - (Segment B Enh	anced)		
		Supply	Installation	Total
C. Blue Stores Junction to Blue Stores Substation				
1. CLEARING & ACCESS	\$	-	\$ 1,404,512	\$ 1,404,512
2. FOUNDATIONS	\$	236,848	\$ 925,954	\$ 1,162,802
3. STRUCTURES	\$	596,484	\$ 946,665	\$ 1,543,149
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	84,763	\$ 387,095	\$ 471,858
5. INSULATORS, FITTINGS, HARDWARE	\$	107,544	\$ 56,496	\$ 164,040
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	82,051	\$ 902,403	\$ 984,454
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,107,690	\$ 4,623,125	\$ 5,730,815
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,107,690	\$ 4,623,125	\$ 5,730,815

Descr	iption	of \	Nork:

1.1 Permanent Access Road	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1.1 Clearing the ROW - Heavy (moving & clearing)	C. Blue S	tores Junction to Blue Stores Substation								
A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A contact A co	1. CLEARING &	ACCESS								
1.3 Permanent Access Road	1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.1 Silf-Perice		Clearing the ROW - Light (mowing)	4.0	Acre	\$ -	\$ -	,	*	1	,
15 Matting - Arcess and ROW										
1.6 Matting To Work Area 1.80.0 LF \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$. \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$.					т	т				
1.7 Snow Removal 2.1 Mile \$ \$ \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,000 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 1,000 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,00 \$ 33,						\$ -				
1.8 ROW Restoration 2.1 Mile 5						\$ -				
1.9 Work Pads 120,0000 SP S						•				
1.10 Restoration for Work Pad areas 24,000 SF S						т				
1.11 Temporary Access Bridge		1 111			,	•				
1.12 Air Bridge			24,000.0			7				
1 Stabilized Construction Entrance 1 EA S	1.11	Temporary Access Bridge	-	EA	\$ -	\$ -				
1.14 Maintenane and Protection of Traffic on Public Roads 2 EA \$	1.12		-	EA	\$ -	\$ -				
1.15 Sates	1.13	Stabilized Construction Entrance			\$ -	\$ -				
1.16 Culverts / Misc. Access - EA \$ 750 \$ - \$ 1,250 \$ - \$ 2,000 \$ - \$ 1.7 Concrete Washout Station - EA \$ - \$ - \$ - \$ 1,500 \$ - \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,404,512 \$ 5 1,40	1.14	Maintenance and Protection of Traffic on Public Roads	2	EA		7				
1.17	1.15		-	EA						
TOTAL CLEARING & ACCESS: \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$ 1,404,512 \$	1.16	Culverts / Misc. Access	-	EA	\$ 750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
2.1 Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE 6 EA \$ 31,225 \$ 187,348 \$ 31,559 \$ 189,354 \$ 62,784 \$ 376,702 2.2 Direct Embed - 115kV Single Circuit H- Pole Tangent 18 EA \$ 2,750 \$ 49,500 \$ 18,700 \$ 336,600 \$ 21,450 \$ 386,100 2.3 Rock Excavation Adder 200 CY \$ - \$ - \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 2.4 2.5 2.6 2.6 2.7 2.7 2.8 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9			-	EA	\$ -	\$ -	\$ 1,850	\$ -	\$ 1,850	\$ -
2.1 Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE 6 EA \$ 31,225 \$ 187,348 \$ 31,559 \$ 189,354 \$ 62,784 \$ 376,700 \$ 2.2 Direct Embed - 115kV Single Circuit H- Pole Tangent 18 EA \$ 2,750 \$ 49,500 \$ 18,700 \$ 336,600 \$ 21,450 \$ 386,100 \$ 2.3 Rock Excavation Adder 200 CY \$ - \$ - \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,000 \$ 2.0 \$ 400,00	TOTAL - CLEAR	ING & ACCESS:				\$ -		\$ 1,404,512		\$ 1,404,512
2.2 Direct Embed - 115kV Single Circuit H- Pole Tangent 18 EA \$ 2,750 \$ 49,500 \$ 18,700 \$ 336,600 \$ 21,450 \$ 386,100 2.3 Rock Excavation Adder 2.0 CY \$ - \$ - \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 2.4	2. FOUNDATIO	NS								
2.3 Rock Excavation Adder 200 CY \$ - \$ - \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2,000 \$ 400,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,000 \$ 2,0	2.1	Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE	6	EA	\$ 31,225	\$ 187,348	\$ 31,559	\$ 189,354	\$ 62,784	\$ 376,702
2.4 .	2.2	Direct Embed - 115kV Single Circuit H- Pole Tangent	18	EA	\$ 2,750	\$ 49,500	\$ 18,700	\$ 336,600	\$ 21,450	\$ 386,100
2.5 2.6 2.7 2.8 2.9 2.10 2.11 2.12 2.13 2.14	2.3	Rock Excavation Adder	200	СУ	\$ -	\$ -	\$ 2,000	\$ 400,000	\$ 2,000	\$ 400,000
2.6 2.7 2.8 2.9 2.10 2.11 2.12 2.13 2.14	2.4									
2.7 2.8 2.9 2.10 2.11 2.12 2.13 2.14										
2.7 2.8 2.9 2.10 2.11 2.12 2.13 2.14	2.6									
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2.10 2.11 2.12 2.13 2.14	2.8									
2.11 2.12 2.13 2.14	2.9									
2.12 2.13 2.14	2.10									
2.13 2.14	2.11									
2.14	2.12									
	2.13									
2.15	2.14									
	2.15									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
TOTAL - FOUND					\$ 236,848		\$ 925,954		\$ 1,162,802
3. STRUCTURES									
3.1	115kV Single Circuit H- Pole Angle/ DE	6	Structure	\$ 39,822	\$ 238,929		\$ 143,358		
3.2	115kV Single Circuit H- Pole Tangent	18	Structure	\$ 18,515	\$ 333,266	\$ 11,109	\$ 199,960	\$ 29,624	\$ 533,226
3.3	Remove Existing Foundation	-	EA	\$ -	\$ -	\$ 7,500	\$ -	\$ 7,500	\$ -
3.4	Remove Existing Structure and Accessories	27	EA	\$ -	\$ -	\$ 12,500	\$ 337,500	\$ 12,500	\$ 337,500
3.5									
3.6	Install Grounding and Grounding Accessories	48	Pole	\$ 506	\$ 24,288	\$ 5,539	\$ 265,848	\$ 6,045	\$ 290,136
3.7									
3.9									
3.10									
3.11									
3.12									
3.13									
3.14									
3.15									
TOTAL - STRUC					\$ 596,484		\$ 946,665		\$ 1,543,149
	R, SHIELDWIRE, OPGW		15	ć	ć	ć F.00	ć	ć Foo	ć
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571	-	LF LF	\$ - \$ -	·	\$ 5.00 \$ 5.00			\$ - \$ -
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ -		\$ 5.00			\$ -
4.4	115kV - (1) 795kcmil 26/7 ACSR "Drake"	34,927.0	LF	\$ 1.72	·				
4.5	(1) OPGW 36 Fiber AC-33/38/571	11,642.0	LF	\$ 1.35					\$ 73,927
4.6	(1) 3/8" EHS7 Steel	11,642.0	LF	\$ 0.47	\$ 5,472	\$ 5.00	\$ 58,210	\$ 5.47	\$ 63,682
4.6	Remove Existing Cable	2.1	Mile	\$ 0.47		\$ 30,000	\$ 63,600	\$ 30,000.00	\$ 63,600
4.8	Remove Existing OPGW Cable and Accessories	-	Mile	\$ -	·	\$ 12,000	\$ 03,000		\$ -
4.9	Remove Existing OHSW and Accessories	2.1	Mile	\$ -		\$ 12,000	\$ 25,440		\$ 25,440
4.10		-				,		,	
4.11		-							
4.12	Rider Poles (Locations)	2.0	EA	\$ 1,750	\$ 3,500	\$ 3,500	\$ 7,000	\$ 5,250.00	\$ 10,500
4.13									
TOTAL - COND	JCTOR, SHIELDWIRE, OPGW:				\$ 84,763		\$ 387,095		\$ 471,858
5. INSULATOR,	FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	54	Assembly	\$ 900	\$ 48,600	\$ 360	\$ 19,440	\$ 1,260	\$ 68,040
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	36	Assembly	\$ 900	\$ 32,400	\$ 360	\$ 12,960	\$ 1,260	\$ 45,360
5.5			Assembly		\$ -		\$ -	\$ -	\$ -
5.6	OPGW Assembly - Tangent	18	Assembly	\$ 200	\$ 3,600	\$ 150	\$ 2,700	\$ 350	\$ 6,300
5.7	OPGW Assembly - Angle / DE	12	Assembly	\$ 250	\$ 3,000	\$ 150	\$ 1,800	\$ 400	\$ 4,800
E 0	OHSW Assembly, Tangent	18	Accombly	\$ 200	\$ 3,600	\$ 150	\$ 2,700	\$ 350	\$ 6,300
5.8 5.9	OHSW Assembly - Tangent OHSW Assembly - Angle / DE	12	Assembly	\$ 250					
5.10	OPGW Splice Boxes	2	Assembly Set	\$ 1,746			\$ 4,548		\$ 8,040
5.10	OPGW Splice & Test	2	Set EA	\$ 1,746	·				\$ 8,040
5.11	Spacer - Conductor	-	EA	\$ 2,320	\$ 5,040	\$ 2,520		\$ 3,040	\$ 10,080
5.12	Vibration Dampers - Conductor	72	EA	\$ 35	\$ 2,520				\$ 5,040
	Shieldwire / OPGW Dampers, Misc. Fittings	25	EA				+		
	Guys, Anchors, and Accessories	-	EA EA	\$ 27 \$ 720		\$ 885		\$ 1,605	
	Misc. materials (Signs and Markers)	2.1	Mile	\$ 720					
5.17	(Signs and markets)	2.1	···iic	770	- 1,517	- 1,000	2,113	1,770	÷ 5,730
	ATORS, FITTINGS, HARDWARE:				\$ 107,544		\$ 56,496		\$ 164,040
C. Blue S	tores Junction to Blue Stores Substation				\$ 1,025,639		\$ 3,720,722		\$ 4,746,361
6. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 276,245	\$ 276,245	\$ 276,245	\$ 276,245
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 237,318	\$ 237,318	\$ 237,318	\$ 237,318
6.6	Lidar	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.7	Geotech	2	Location	\$ -	\$ -	\$ 3,500	\$ 7,000	\$ 3,500	\$ 7,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 33,225	\$ 33,225	\$ 33,225	\$ 33,225
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	,	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 153,000	\$ 153,000	\$ 153,000	\$ 153,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Sales Tax on Materials	1	LS	\$ 82,051	\$ 82,051		\$ -	\$ 82,051	
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 4,746		\$ 4,746	. ,
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 82,051		\$ 902,403		\$ 984,454

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NAT - NYPA - T030 - (Segment B Enhanced)

D. Knickerbocker 345kV Substation - Install

Estimate Revision: 5 Total: \$ 18,891,529

NAT - NYPA - T030 - (Segment B Enhanced)								
		Supply		Installation		Total		
D. Knickerbocker 345kV Substation - Install								
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	277,200	\$	1,745,500	\$	2,022,700		
2. SUBSTATION FOUNDATIONS	\$	1,467,421	\$	1,581,150	\$	3,048,571		
3. SUBSTATION STRUCTURES	\$	710,400	\$	710,400	\$	1,420,800		
4. MAJOR EQUIPTMENT	\$	600,000	\$	240,000	\$	840,000		
5. SMALL EQUIPTMENT / MATERIALS	\$	1,191,500	\$	542,000	\$	1,733,500		
6. CONTROL HOUSE / PANELS	\$	1,678,925	\$	1,232,275	\$	2,911,200		
7. MISC ITEMS	\$	1,114,327	\$	1,890,902	\$	3,005,229		
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	563,182	\$	3,346,347	\$	3,909,529		
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-		
SUBTOTAL:	\$	7,602,955	\$	11,288,574	\$	18,891,529		
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-		
TOTAL:	\$	7,602,955	\$	11,288,574	\$	18,891,529		

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Knick	erbocker 345kV Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	4.75	ACRES	\$ -	\$ -	\$ 230,000	\$ 1,092,500	\$ 230,000	\$ 1,092,500
1.2	Station stone within substation fence.	2,100	CY	\$ 27	\$ 56,700	\$ 75	\$ 157,500	\$ 102	\$ 214,200
1.3	Substation Fence	1,820	LF	\$ 100	\$ 182,000	\$ 100	\$ 182,000	\$ 200	\$ 364,000
1.4									
1.5									
1.6	Permanent Access Road - 20'-Wide	1,100	LF	\$ 35	\$ 38,500	\$ 285	\$ 313,500	\$ 320	\$ 352,000
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ 277,200		\$ 1,745,500		\$ 2,022,700
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	3	EA	\$ 14,940	\$ 44,820	\$ 16,000	\$ 48,000	\$ 30,940	\$ 92,820
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 26,145	\$ 104,580	\$ 28,000	\$ 112,000	\$ 54,145	\$ 216,580
2.1d	Caisson DE Foundations (for DE A frame str shared column)	6	EA	\$ 26,145	\$ 156,870	\$ 28,000	\$ 168,000	\$ 54,145	\$ 324,870
2.1e	Switch Stand Foundations	96	EA	\$ 4,482	\$ 430,272	\$ 4,800	\$ 460,800	\$ 9,282	\$ 891,072
2.1f	Station Service Transformer Stand Foundation	4	EA	\$ 4,482	\$ 17,928	\$ 4,800	\$ 19,200	\$ 9,282	\$ 37,128
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	63	EA	\$ 4,482	\$ 282,366	\$ 4,800	\$ 302,400	\$ 9,282	\$ 584,766
2.1j	Instrument Transformer Stand Foundations	27	EA	\$ 4,482	\$ 121,014	\$ 4,800	\$ 129,600	\$ 9,282	\$ 250,614
2.1k	Arrester Stand Foundations	9	EA	\$ 4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1m	Wave Trap Stand Foundations	3	EA	\$ 4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1p	Reactor Foundations	0	EA	\$ 7,470	\$ -	\$ 8,000	\$ -	\$ 15,470	\$ -
2.1q									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	8	EA	\$ 16,434	\$ 131,472	\$ 17,600	\$ 140,800	\$ 34,034	\$ 272,272
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3h	Bus Support 1 Ph Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3j	Instrument Transformer Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3k	Arrester Stand Foundations	6	EA	\$ 2,988	\$ 17,928	\$ 3,200	\$ 19,200	\$ 6,188	\$ 37,128
2.3m	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 33,615	\$ 33,615	\$ 36,000	\$ 36,000	\$ 69,615	\$ 69,615
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
2.5c	Station Service Distributuion Line - 3ph.	1	LS	\$ -	\$ -	\$ 9,750	\$ 9,750	\$ 9,750	\$ 9,750
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	4	EA	\$ 5,229	\$ 20,916	\$ 5,600	\$ 22,400	\$ 10,829	\$ 43,316
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c	_			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBS	TATION FOUNDATIONS				\$ 1,467,421		\$ 1,581,150		\$ 3,048,571
	N STRUCTURES								
3.1	345kV								

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rat	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1a	Substation A-Frame Structures - Stand alone	1	EA	\$ 37,00	37,000	\$ 37,000	\$ 37,000	\$ 74,000	\$ 74,000
3.1b	Substation A-Frame Structures - Shared Column	2	EA	\$ 37,00	0 \$ 74,000	\$ 37,000	\$ 74,000	\$ 74,000	\$ 148,000
3.1c	Switch Stands	16	EA	\$ 14,80	3 \$ 236,800	\$ 14,800	\$ 236,800	\$ 29,600	\$ 473,600
3.1d	Station Service Transformer Stand	1	EA	\$ 14,80	0 \$ 14,800	\$ 14,800	\$ 14,800	\$ 29,600	\$ 29,600
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph	63	EA	\$ 3,70	5 \$ 233,100	\$ 3,700	\$ 233,100	\$ 7,400	\$ 466,200
3.1g	Instrument Transformer Stand	27	EA	\$ 1,85	9,950	\$ 1,850	\$ 49,950	\$ 3,700	\$ 99,900
3.1h	Arrester Stand	9	EA	\$ 1,85) \$ 16,650	\$ 1,850	\$ 16,650	\$ 3,700	\$ 33,300
3.1j	Wave Trap Stand	3	EA	\$ 7,40	22,200	\$ 7,400	\$ 22,200	\$ 14,800	\$ 44,400
3.1k	Misc. Structures	4	EA	\$ 6,47	5 \$ 25,900	\$ 6,475	\$ 25,900	\$ 12,950	\$ 51,800
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,30) \$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,30	0 \$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2c	Switch Stands	0	EA	\$ 12,02	5 \$ -	\$ 12,025		\$ 24,050	\$ -
3.2d	Station Service Transformer Stand	0	EA	\$ 12,02	5 \$ -	\$ 12,025	\$ -	\$ 24,050	\$ -
3.2e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2f	Bus Support 1 Ph	0	EA	\$ 2,77	5 \$ -	\$ 2,775	\$ -	\$ 5,550	\$ -
3.2g	Instrument Transformer Stand	0	EA	\$ 1,29	5 \$ -	\$ 1,295	\$ -	\$ 2,590	\$ -
3.2h	Arrester Stand	0	EA	\$ 1,29	5 \$ -	\$ 1,295	\$ -	\$ 2,590	\$ -
3.2j	Wave Trap Stand	0	EA	\$ 5,55	o \$ -	\$ 5,550	\$ -	\$ 11,100	\$ -
3.2k	Misc. Structures	0	EA	\$ 6,47		\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,50	o \$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,50	o \$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.3c	Switch Stands	0	EA	\$ 7,95		\$ 7,955	\$ -	\$ 15,910	\$ -
3.3d	Fuse Stand	0	EA	\$ 7,95	5 \$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,33	+	\$ 3,330	\$ -	\$ 6,660	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,85		\$ 1,850			\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ 74	_	\$ 740	\$ -	\$ 1,480	\$ -
3.3h	Arrester Stand	0	EA	\$ 74		\$ 740	\$ -	\$ 1,480	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,70	0 \$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
3.3k	Misc. Structures	0	EA	\$ 6,47	5 \$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
		-						,	
TOTAL - SUBS	TATION STRUCTURES				\$ 710,400		\$ 710,400		\$ 1,420,800
4. MAJOR EQU					710,100		Ţ 710,100		2,120,000
4.1	345kV								
4.1a	Circuit Breakers	3	EA	\$ 200,00	5 \$ 600,000	\$ 80,000	\$ 240,000	\$ 280,000	\$ 840,000
4.1b	Capacitor Banks with Reactors	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA			\$ 750,000	\$ -	\$ 750,000	\$ -
4.1e		-				,,,,,,			
4.2	230kV								
4.2a	Circuit Breakers	0	EA	\$ 115,00	o \$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ -		\$ 80,000		\$ 80,000	
		-				1,111		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	115kV								
4.3									
4.3 4.3a	Circuit Breakers	0	EA	\$ 52,00	o \$ -	\$ 60,000	\$ -	\$ 112,000	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
TOTAL BANK	OR FOUNDTMENT				\$ 600,000		\$ 340,000		<u> </u>	040.000
	DR EQUIPTMENT				\$ 600,000		\$ 240,000		\$	840,000
	JIPTMENT / MATERIALS 345kV									
5.1		2	F.A.	\$ 40,000	\$ 120,000	\$ 15.000	\$ 45,000	\$ 55.000		165.000
5.1a 5.1b	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	3 9	EA EA	\$ 40,000 \$ 35,000	\$ 120,000 \$ 315,000	\$ 15,000 \$ 17,500	\$ 45,000 \$ 157,500	\$ 55,000 \$ 52,500	\$	165,000 472,500
	VT'S	9	EA					,	· .	
5.1c 5.1d	CT'S	9	EA	\$ 25,000 \$ 13,000	\$ 225,000 \$ 117,000		\$ 108,000 \$ 72,000	\$ 37,000 \$ 21,000	\$	333,000 189,000
		9	EA	\$ 13,000	\$ 117,000		\$ 72,000	\$ 21,000	Ś	
5.1e	CCVT'S	9		7,			· · · · · · · · · · · · · · · · · · ·	,		189,000
5.1f	Arresters	3	EA EA	,	\$ 58,500	\$ 1,500	\$ 13,500 \$ 24,000	,	\$	72,000
5.1g	Wave Traps			,	\$ 39,000	\$ 8,000	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	· .	63,000
5.1h 5.1j	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ 250,000	\$	250,000
5.1,										
5.2	230kV									
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$	-
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$	-
5.2c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	-
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$	-
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$	-
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$	
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
5.2j										
	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s									
5.3	115kV		F.A.	ć 22.000	¢.	ć 45.000	ć	¢ 40,000		
5.3a	Line Switches - 3ph w/ motor operator	0	EA EA	\$ 33,000 \$ 28,000	\$ - \$ -	\$ 15,000 \$ 17,500	\$ -	\$ 48,000 \$ 45,500	\$	-
5.3b	Disconnect Switches - 3ph w/ manual operator VT'S	0	EA	\$ 28,000 \$ 13,000	\$ - \$ -	-	\$ - \$ -	\$ 43,300	<u> </u>	-
5.3c 5.3d	CT'S	0	EA	\$ 13,000	\$ - \$ -	\$ 8,000 \$ 8,000	\$ - \$ -	\$ 21,000	Ś	
5.3e	CCVT'S	0	EA	\$ 13,000	\$ - \$ -	\$ 8,000	\$ -	\$ 21,000	, ,	
5.3f		0	EA	\$ 3,420	\$ -		\$ -	,	\$	
5.3g	Arresters Wave Traps	0	EA	\$ 3,420	\$ - \$ -	\$ 6,000	\$ -	\$ 9,420 \$ -	\$	-
5.3h		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	Ś	-
5.3j	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
5.3]	Fuses	0	EA	ş -	- -	ş -	-	÷ -	,	
TOTAL - SMAL	LL EQUIPTMENT / MATERIALS				\$ 1,191,500		\$ 542,000		\$	1,733,500
	HOUSE / PANELS / GENERATOR				7 2,222,232		7 0.2,000		7	2): 30):33
6.1	CONTROL HOUSE	1	EA	\$ 286,650	\$ 286,650	\$ 85,000	\$ 85,000	\$ 371,650	\$	371,650
6.2	Protection and Telecom Equipment Panels	15	EA	\$ 35,000	\$ 525,000	\$ 10,000	\$ 150,000	\$ 45,000	\$	675,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$	200,000
6.4	Control Cables	1	LS	\$ 352,275	\$ 352,275	\$ 352,275	\$ 352,275	\$ 704,550	\$	704,550
6.5	SCADA and Communications	1	EA	\$ 50,000	\$ 50,000			\$ 150,000		150,000
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$	300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$	15,000
		1		1			4 7.500	45.000	<u>,</u>	15,000
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	>	13,000
	Fire Alarm Generator	1	EA EA	\$ 7,500 \$ 100,000	\$ 7,500		\$ 7,500	\$ 15,000		180,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material :	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
	OL HOUSE / PANELS / GENERATOR					\$ 1,678,925		\$ 1,232,275		\$	2,911,200
7. MISC ITEMS 7.1	Conduit & Cable Trench System	1,200.0	LF	\$	185.00	\$ 222,000	\$ 170.00	\$ 204,000	\$ 355	\$	426,000
	Rigid Bus, Fittings & Insulators	3,000.0	LF	Ś	125.07	\$ 375,210	\$ 237.10	\$ 711,300	\$ 362	\$	1,086,510
	Strain Bus, Connectors & Insulators	0.0	LF	Ś		\$ -	\$ 53.35			\$	-,,
	Grounding System	16,900.0	LF	Ś		\$ 117,117			\$ 40		667,719
		·		<u> </u>		,				1	
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050		\$ 3,050	+	-
	Strain Bus Insulators - 230kV	0	EA .	\$	1,400		\$ 750		\$ 2,150	_	-
	Strain Bus Insulators - 115kV	0	EA	\$	1,000	\$ -	\$ 550		\$ 1,550	_	
	Low Voltage AC Station Service	1	LS	\$	50,000				\$ 125,000	+	125,000
	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000		\$ 90,000	_	90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$	125,000	\$ 125,000	\$ 125,000		\$ 250,000	+	250,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12											
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20											
7.21											
7.22											
7.23											
7.24											
7.25											
TOTAL - MISC	TEMS					\$ 1,114,327		\$ 1,890,902		\$	3,005,229
D. Knicke	rbocker 345kV Substation - Install					\$ 7,039,773		\$ 7,942,227		\$	14,982,000
8. MOB/DEMO	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 149,820	\$ 149,820	\$ 149,820	\$	149,820
	Project Management, Material Handling & Amenities										
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 871,975	\$ 871,975	\$ 871,975	\$	871,975
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 149,820	\$ 149,820	\$ 149,820	\$	149,820
	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 149,820		\$ 149,820	+	149,820
	Engineering	1	LJ	7	-	-	7 143,020	7 143,020	7 143,820	+	143,020
	Design Engineering	1	LS	Ś	_	\$ -	\$ 1,198,560	\$ 1,198,560	\$ 1,198,560	\$	1,198,560
	LiDAR		Mile	\$		\$ -	\$ 1,198,360	\$ 1,198,360	\$ 1,198,560	\$	1,190,500
	Geotech	2	EA	\$		\$ -	\$ 3,500	<u> </u>		+ -	7,000
	Surveying/Staking	1	Site	\$	-	\$ -	\$ 3,500				104,874
	Testing & Commissioning	1	Site	۶	-	-	104,874	7 104,874	پ 104,874	+	104,874
		1	1.5	\$		\$ -	\$ 374,550	¢ 274.550	\$ 374,550		274 550
	Testing & Commissioning of T-Line and Equipment	1	LS	13	-	\$ -	φ 3/4,550	\$ 374,550	φ 3/4,550	+	374,550
	Permitting and Additional Costs		1.5	-		¢.	c c			-	
	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	Environmental Mitigation	-	LS	\$		\$ -	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$	-	\$ -	\$ 44,946	\$ 44,946	\$ 44,946	Ş	44,946

Item	Item Description	Estimated Quantity	Unit of Measure	Material S	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.13	Real Estate Costs (New)	1	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$ -	\$ 280,000	\$ 280,000	\$ 280,000	\$ 280,000
8.15	Legal Fees	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	563,182	\$ 563,182	\$ -	\$ -	\$ 563,182	\$ 563,182
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$ -	\$ 14,982	\$ 14,982	\$ 14,982	\$ 14,982
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 563,182		\$ 3,346,347		\$ 3,909,529

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D. SS Knickerbocker - Install

NAT - NYPA - T030 - (Segment B Enhanced) Total: \$ 71,678

NAT - NYPA - T030 - (Segmen	NAT - NYPA - T030 - (Segment B Enhanced)										
	Supply		Installation	Т	otal						
E. Greenbush Substation - Removal											
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	-	\$ -	\$	-						
2. SUBSTATION FOUNDATIONS	\$	-	\$ 12,000	\$	12,000						
3. SUBSTATION STRUCTURES	\$	-	\$ -	\$	-						
4. MAJOR EQUIPTMENT	\$	-	\$ 7,000	\$	7,000						
5. SMALL EQUIPTMENT / MATERIALS	\$	-	\$ 35,000	\$	35,000						
6. CONTROL HOUSE / PANELS	\$	-	\$ 7,200	\$	7,200						
7. MISC ITEMS	\$	-	\$ -	\$	-						
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 10,478	\$	10,478						
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-						
SUBTOTAL:	\$	-	\$ 71,678	\$	71,678						
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$							
TOTAL:	\$	-	\$ 71,678	\$	71,678						

)acer	mti	an at	MALON	
Jesci	μu	OH O	Wor	٨.

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
E. Green	bush Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	0	CY	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	0	LF	\$ -	\$ -	\$ 150	\$ -	\$ 150	\$ -
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL				\$ -		\$ -		\$ -
	FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 14,200	\$ -	\$ 14,200	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$ 32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ 11,000	\$ -	\$ 11,000	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	'	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.2	AAFIAI								
2.3 2.3a	115kV Circuit Breaker Foundations	1	EA	\$ -	\$ -	\$ 7,200	\$ 7,200	\$ 7,200	\$ 7,200
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ 7,200		\$ 7,200	\$ 7,200
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	Š -		\$ -	\$ -
2.3e	Switch Stand Foundations	0		\$ -	\$ -	\$ 5,200	'	\$ 5,200	
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3j	Instrument Transformer Stand Foundations	2	EA	\$ -	\$ -	\$ 2,400	\$ 4,800	\$ 2,400	\$ 4,800
2.3k	Arrester Stand Foundations	0		\$ -	\$ -	\$ -		\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -			\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0		\$ -	\$ -	\$ -		\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0		\$ -	\$ -	\$ 42,000			\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad Control House / Pad	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
2.30	Generator roundation	0	LA	-	, -	-	, -	· -	-
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION FOUNDATIONS				\$ -		\$ 12,000		\$ 12,000
	NSTRUCTURES								
3.1	345kV								
3.1a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	'	\$ -	\$ -
3.1c	Switch Stands	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1d	Station Service Transformer Stand	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1f 3.1g	Bus Support 1 Ph	0	EA EA	\$ -	\$ - \$ -	\$ 2,250			\$ - \$ -
3.1g 3.1h	Instrument Transformer Stand Arrester Stand	0	EA	\$ -	\$ -	\$ -	· .	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -		\$ -	\$ -
3.1k	Misc. Structures	0		\$ -	\$ -	\$ -		\$ -	\$ -
5.1K				T	T	-	T	Ŧ	7
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -		\$ -	\$ 27,000	
3.2c	Switch Stands	0	EA	\$ -	\$ -	\$ 9,750		\$ 9,750	
	Station Service Transformer Stand	0	EA	\$ -	\$ -			\$ -	
	Bus Support 3ph	0		\$ -	\$ -			\$ -	
	Bus Support 1 Ph	0		\$ -	\$ -			\$ 2,250	
3.2g	Instrument Transformer Stand	0		\$ -	\$ -			\$ 1,050	
3.2h	Arrester Stand	0		\$ -		\$ 1,050		\$ 1,050	
3.2j	Wave Trap Stand	0		\$ -	\$ -			\$ 4,500	
3.2k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	aarlar								
3.3	115kV		FA.		ć	¢ 45.000	ć	ć 4F 000	¢.
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	Page 10 of 60

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.3b	Substation A-Frame Structures - Shared Column	0		\$ -	\$ -	\$ -	\$ -		\$ -
3.3c	Switch Stands	0	EA	\$ -	\$ -	\$ 6,450	\$ -	\$ 6,450	\$ -
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ATION CTRUCTURES				4		4		4
	ATION STRUCTURES				\$ -		\$ -		\$ -
4. MAJOR EQU									
4.1	345kV		F.4		4			A	
4.1a	Circuit Breakers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b 4.1c	Capacitor Banks	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ -	\$ - \$ -	\$ - \$ -
4.1c 4.1d		U	EA	\$ -	\$ -	\$ -	\$ -	\$ -	-
4.10	230kV								
4.2a	Circuit Breakers	0	EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2a 4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 42,000	'	\$ 42,000	
7.20	- capacitor barnes	0			-	42,000	<u> </u>	y 42,000	-
4.3	115kV								
4.3a	Circuit Breakers	1	EA	\$ -	\$ -	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	capacitor barno		2,	,	<u> </u>	,	,	*	*
TOTAL - MAJO	R EQUIPTMENT				\$ -		\$ 7,000		\$ 7,000
	PTMENT / MATERIALS				*		,,,,,,		7 1,000
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -			\$ 5,500	
5.1c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0		\$ -	\$ -	\$ 5,500		\$ 5,500	
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -			\$ 5,500	
5.2c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.2f	Arresters Ways Trans	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
5.2g	Wave Traps Station Service Transformers	0	EA EA	\$ -	\$ - \$ -	\$ 2,500 \$ -	\$ - \$ -	\$ 2,500	\$ -
5.2h 5.2j	Station Service HallStOfflets	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2]									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -			\$ 5,500	
5.3c	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3d	CT'S	0	EA	\$ -	\$ -	Š -	\$ -	\$ -	\$ -
5.3e	CCVT'S	2	EA	\$ -		\$ 17,500		,	•
	Arresters	0		\$ -	\$ -			\$ 1,500	
	Wave Traps	0		\$ -	\$ -		\$ -		\$ -
	Station Service Transformers	0		\$ -	\$ -		\$ -		\$ -
	Fuses	0		\$ -			\$ -		\$ -
,,				·			·		
TOTAL - SMAL	EQUIPTMENT / MATERIALS				\$ -		\$ 35,000		\$ 35,000
	DUSE / PANELS / GENERATOR						22,300		22,200
	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
•				•		•			

EMOB/DEMOS, ENCINEERING, PRAINTING, T&C, PM & INDIRECTS:	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
4 Correlacion 5 15 5 5 5 5 5 5 5	6.2	Protection and Telecom Equipment Panels	2	EA	\$ -	\$ -	\$ 3,600	\$ 7,200	\$ 3,600	\$ 7,200
SCADA and Communications	6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	6.4	Control Cables	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Comparison of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property o	6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6 Security	6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.0 File Asimm	6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction	6.8	Security	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL-COMPOUNDUS / FAMILY GENERATOR	6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL-CONTOL HOUSE / PANES / GENERATOR			0	EA		\$ -	\$ -	\$ -	\$ -	\$ -
Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Total Tota										·
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1								, , , , ,		, , , ,
7.2 Rigid Bus Pittings & Hosilators		Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000,00	\$ -	\$ 42,000	\$ -
7.7 Strain Buy, Connections & Insulations					·	s -				
7.4 Grounding System						\$ -				
7.5						т		·		•
7.6			0		· ·	-	7 42,000.00	7		7
7.7										
7.8										
7.9										
7.10										
7.11										
7.12										
7.13										
7.14										
TOTAL - MISC ITEMS										
S										
S. S. S. S. S. S. S. S.						_		4		4
R. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	TOTAL - MISC	ITEMS				\$ -		\$ -		\$ -
Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilizati	E. Green	bush Substation - Removal				\$ -		\$ 61,200		\$ 61,200
Contractor Mobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilization / Demobilizati	8. MOB/DEMO	B. FNGINFFRING. PERMITTING. T&C. PM & INDIRECTS:								
S.1 Mob / Demob 1.0 U.S S S S S S S S S S		, , ,								
Project Management, Material Handling & Amenities		· · · · · · · · · · · · · · · · · · ·	1.0	IS	\$ -	\$ -	\$ 612	\$ 612	\$ 612	\$ 612
8.2 Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff) 8.3 Utility PM and Project Oversite 8.4 Site Accommodation, Facilities, Storage 1 15 \$ \$. \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 612 \$ 61			1.0		,	,	, oll	V 012	ŷ 01L	, J
Site Accommodation, Facilities, Storage	8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler	1	LS			\$ 3,562	\$ 3,562	\$ 3,562	\$ 3,562
Site Accommodation, Facilities, Storage	8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 612	\$ 612	\$ 612	\$ 612
S. Design Engineering			1	LS	\$ -	\$ -	\$ 612	\$ 612	\$ 612	\$ 612
8.6 LiDAR		Engineering								
8.7 Geotech - Site S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S	8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 4,896	\$ 4,896	\$ 4,896	\$ 4,896
8.8 Surveying/Staking - Site \$ - \$ - \$ 428 \$ - \$ 428 \$ \$ \$ \$ \$ \$ \$ \$ \$	8.6	Lidar	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Testing & Commissioning Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Scien	8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Testing & Commissioning Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Science Second Scien	8.8	Surveying/Staking	-			\$ -	\$ 428	\$ -	\$ 428	\$ -
8.9 Testing & Commissioning of T-Line and Equipment S										
Permitting and Additional Costs			-	LS	\$ -	\$ -	\$ 1.530	\$ -	\$ 1.530	\$ -
8.10 Environmental Licensing & Permitting Costs - LS S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S -				-			, , , , , , , , , , , , , , , , , , , ,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
8.11 Environmental Mitigation - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			-	LS	Ś -	ś -	Ś -	\$ -	\$ -	\$ -
8.12 Warranties / LOC's 1 LS \$ - \$ - \$ 184 \$ 184 \$ 8.13 Real Estate Costs (New) 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						7	<u>'</u>		т	
8.13 Real Estate Costs (New) 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$							•			·
8.14 Real Estate Costs (incumbent Utility) 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>										
8.15 Legal Fees - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -										
8.16 Allowance for Funds Used During Construction (AFUDC) - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td>						-				
8.17 - LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <td></td> <td><u> </u></td> <td></td> <td></td> <td></td> <td>т</td> <td></td> <td></td> <td>•</td> <td></td>		<u> </u>				т			•	
8.18 Sales Tax on Materials 1 LS \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - </td <td></td> <td>Anowance for runus used burning construction (APUDC)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		Anowance for runus used burning construction (APUDC)								
8.19 Fees for permits, including roadway, railroad, building or other local permits - LS \$ - \$ 61 \$ - \$ 61 \$		Colos Toy on Materials				т			т	
					ş -	т	7		т	
TOTAL - MIOS/DENIUS, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:			-	LS			61		61 و	
	TOTAL - MOB/	DEIVIUB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				> -		5 10,478		\$ 10,478

NAT - NYPA - T030 - (Segment B Enhanced) F. Schodack Substation - Install

Total: \$ 2,597,782

NAT - NYPA - T030 - (Segmen	nt B Enl	hanced)		
		Supply	Installation	Total
F. Schodack Substation - Install				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	4,050	\$ 11,250	\$ 15,300
2. SUBSTATION FOUNDATIONS	\$	201,690	\$ 216,000	\$ 417,690
3. SUBSTATION STRUCTURES	\$	60,680	\$ 60,680	\$ 121,360
4. MAJOR EQUIPTMENT	\$	104,000	\$ 120,000	\$ 224,000
5. SMALL EQUIPTMENT / MATERIALS	\$	316,520	\$ 226,000	\$ 542,520
6. CONTROL HOUSE / PANELS	\$	192,815	\$ 147,815	\$ 340,630
7. MISC ITEMS	\$	168,552	\$ 259,305	\$ 427,857
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	83,865	\$ 424,560	\$ 508,425
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	1,132,172	\$ 1,465,610	\$ 2,597,782
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	1,132,172	\$ 1,465,610	\$ 2,597,782

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Descii	puon o	VVOI	٨.

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material	Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
F. Schod	ack Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$ -
1.2	Station stone within substation fence.	150	CY	\$		\$ 4,050			\$ 102	
1.3	Substation Fence	0	LF	\$	100	\$ -	\$ 100		\$ 200	
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 4,050		\$ 11,250		\$ 15,300
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	0	EA	\$	14,940	\$ -	\$ 16,000	\$ -	\$ 30,940	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410	\$ -		\$ -	\$ 46,410	
	· '						,		,	Page 22 of 60

2-22 martin Sour Immediates	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment	Labor & Equipment	Total Unit Rate	TOTAL
2.20 Stock Foreign Fame Foreign Fame Foreign Fame Foreign Fame Foreign Fame Foreign Fame Foreign Fame Foreign Fame Foreign Fame Foreign Fame Fame Fame Fame Fame Fame Fame Fame	item	item bescription	Estimated Quantity	Onit of Weasure	Waterial Supply Nate	тиссты заррту созс	Supply Rate	Cost	Total Ollic Rate	TOTAL
2.72 10 10 10 10 10 10 10 1	2.2e	Switch Stand Foundations			,	\$ -		\$ -	. ,	
2-20										
2.23 West American State Foundations 0 EA 5 A773 5 5 4,000 5 5 7,781 5							•		·	
2.28					,	-	. ,		, ,	
2.20						•				
2.70 Mix. Source Foundations										
2.50						т				
2.3 Circuit President Fearbrichtons 2 FA 5 \$1.20 5 \$1.000 5 \$1.000 5 \$2.20 2.3 \$1.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3		Misc. Structure Foundations	0	LA	7	,	Ÿ	,	-	7
2.3 Circuit President Fearbrichtons 2 FA 5 \$1.20 5 \$1.000 5 \$1.000 5 \$2.20 2.3 \$1.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3.000 5 \$3	2.2	115W								
2.28 Cappetine Pain Foundations 0 UA 5 32,62 5 5 36,000 5 6,000 5			2	FA	\$ 5,229	\$ 10.458	\$ 5,600	\$ 11,200	\$ 10.829	\$ 21,658
2.5. (Calsoon FF Soundations (FO FF A Sine May 1. 17, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA, 200 5 MA						\$ -				
2.36 Canson Bit Soundations (for U.A. A form est s.*-shared column)						\$ 131,472	1,	_	,	
2-26 Switch Sand Foundations 0 EA 5 2,588 5 5 3,200 5 5 6,188 5		· · · · · · · · · · · · · · · · · · ·								
2.38 Bos Support 3 Pri connectores						•				
2.3h Rus Support Th FaceAntinon 0 FA \$ 2,008 \$ \$ 3,000 \$ \$ 6,108 \$ \$ 2.2h Rus Face Foundations 6 FA \$ 2,008 \$ \$ 1,728 \$ 3,200 \$ 1,920 \$ 6,108 \$ 5 22 \$ 2.2h Amester Stand Foundations 6 FA \$ 2,268 \$ 1,728 \$ 3,200 \$ 1,920 \$ 6,108 \$ 5 27 \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2h \$ 2.2	2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -			\$ 6,188	\$ -
2.38	2.3g	Bus Support 3ph Foundations				\$ 11,952				
2.3						т				
2.3m									, , , , , , , , , , , , , , , , , , , ,	· · · · · · · · · · · · · · · · · · ·
2.39					, , , , , , , , , , , , , , , , , , , ,					
2.3					. ,					·
2.4 Tandformer Foundations						т				
2.4a 345-238V Transformer foundation wy Oil Containment 0 EA S 97,110 S S 201,100 S S 201,110 S	2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.48 345-328NT transformer Foundation wy Oil Containment	2.4	Transformer Foundations								
2.46			0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.48 155K-96W transformer Foundation w/ Oil Containment 0 EA S S S S S S S S S	2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.5 Control House Foundations / Pad	2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2-5	2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5										
2.5b Generator Foundation		·								
2.6 Lightning Mast Foundations						•		т		·
2.6a 70 Lightning Mast Foundation 0 EA \$ \$ \$ \$ \$ \$ \$ \$ \$	2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6b 60 \(\text{lighting Mast Foundation} \\	2.6	Lightning Mast Foundations								
2.66 SO' Lightning Mast Foundation Color Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society Society	2.6a		0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
TOTAL - SUBSTATION FOUNDATIONS \$ 201,690 \$ 216,000 \$ 417	2.6b	60' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.10 345KY	2.6c	50' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.10 345KY	TOTAL - SUBST	TATION FOLINDATIONS				\$ 201 690		\$ 216,000		\$ 417,690
3.1. Substation A-Frame Structures - Stand alone 0 EA S 37,000 S - S 574,000 S 3.1.						201,030		\$ 210,000		\$ 417,030
3.1a Substation A-Frame Structures - Stand alone 0 EA S 37,000 S - S 74,000 S 3.1b Substation A-Frame Structures - Shared Column 0 EA S 37,000 S - S 74,000 S 3.1c Substation A-Frame Structures - Shared Column 0 EA S 37,000 S - S 74,000 S 3.1d Station Service Transformer Stand 0 EA S 14,800 S - S 14,800 S - S 29,600 S 3.1d Station Service Transformer Stand 0 EA S 14,800 S - S 14,800 S - S 29,600 S 3.1d Bus Support 3ph 0 EA S 3,700 S - S - S - S - S 3.1f Bus Support 1Ph 0 EA S 3,700 S - S 3,700 S - S 7,400 S 3.1g Instrument Transformer Stand 0 EA S 1,850 S - S 1,850 S - S 3,700 S 3.1g Instrument Transformer Stand 0 EA S 1,850 S - S 1,850 S - S 3,700 S 3.1h Arrester Stand 0 EA S 1,850 S - S 1,850 S - S 3,700 S 3.1h Arrester Stand 0 EA S 1,850 S - S 1,850 S - S 1,850 S 3.1k Misc. Structures 0 EA S 6,475 S - S 6,600 S 3.2b Substation A-Frame Structures - Shared Column 0 EA S 33,300 S - S 33,300 S - S 66,600 S 3.2c Switch Stands 0 EA S 12,025 S - S 12,025 S - S 24,050 S 3.2d Substation A-Frame Structures - Shared Column 0 EA S 12,025 S - S 12,025 S - S 5,550 S 3.2f Bus Support 1Ph 0 EA S 1,295 S - S 1,295 S - S 5,550 S 3.2g Instrument Transformer Stand 0 EA S 1,295 S - S 1,295 S - S 2,590 S 3.2h Arrester Stand 0 EA S 1,295 S - S 1,295 S - S 2,590 S 3.2h Arrester Stand 0 EA S 1,295 S - S 1,295 S - S 2,590 S 3.2h Arrester Stand 0 EA S 1,295 S - S 1,295 S - S 2,590 S 3.2h Arrester Stand 0 EA S 1,295 S - S										
3.1b Substation A-Frame Structures - Shared Column 0 EA \$ 37,000 \$ -			0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1d Station Service Transformer Stand 0 EA \$ 14,800 \$ - \$ 29,600 \$ 3.1e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ 3.1f Bus Support 1Ph 0 EA \$ - \$ - \$ - \$ 3.1g Instrument Transformer Stand 0 EA \$ 1,850 \$ - \$ 3,700 \$ 3.1h Arrester Stand 0 EA \$ 1,850 \$ - \$ 1,850 \$ - \$ 3.1h Arrester Stand 0 EA \$ 1,850 \$ - \$ 1,850 \$ - \$ 3.1j Wave Trap Stand 0 EA \$ 1,850 \$ - \$ 1,850 \$ - \$ 3.1j Wave Trap Stand 0 EA \$ 1,850 \$ - \$ 1,850 \$ - \$ 3.1j Wave Trap Stand 0 EA \$ 1,850 \$ - \$ 1,850 \$ - \$ 3.1k Misc. Structures 0 EA \$ 6,475 \$ - \$ 1,850 \$ - \$ 3.2d Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 66,600 \$ 3.2d Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 66,600 \$ 3.2d Substation A-Frame Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures - Stand Structures	3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ 5 - \$ 5 - \$ \$ \$ \$ \$ \$ \$ \$ \$	3.1c	Switch Stands	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$ -
3.1f Bus Support 1Ph		Station Service Transformer Stand			\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$ -
3.1g Instrument Transformer Stand 0 EA \$ 1,850 \$ - \$ 1,850 \$ - \$ 3,700 \$ \$ 3.1h Arrester Stand 0 EA \$ 1,850 \$ - \$ 3,700 \$ \$ 3.1h Arrester Stand 0 EA \$ 1,850 \$ - \$ 3,700 \$ \$ \$ \$ \$ \$ \$ \$ \$						т				
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3.1j Wave Trap Stand 0 EA \$ 7,400 \$ - \$ 7,400 \$ - \$ 14,800 \$ 3.1k Misc. Structures 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$ 3.2k 230kV										
3.1k Misc. Structures 0 EA \$ 6,475 \$ - \$ 6,475 \$ - \$ 12,950 \$ 3.2 230kV 3.2 33kV 3.2 33kV 3.2 Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 66,600 \$ 3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$ 66,600 \$ 3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 24,050 \$ 3.2e Bus Support 3ph 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ 3.2f Bus Support 1 Ph 0 EA \$ 2,775 \$ - \$ 5 - \$ 5 5,50 \$ 3.2g Instrument Transformer Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$,	
3.2 230kV 3.2 Substation A-Frame Structures - Stand alone 3.2 Substation A-Frame Structures - Shared Column 5. Substation A-Frame Structures - Shared Column 6. Column 7. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Column 8. Co						т	. ,			<u> </u>
3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 66,600 \$ 3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$ 66,600 \$ 3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 24,050 \$ 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 24,050 \$ 3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	3.1K	INISC. Structures	0	EA	φ 6,4/5	· -	<i>φ</i> 6,4/5	· -	<i>⇒</i> 12,950	, -
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3.2h Arrester Stand 0 EA \$ 1,295 \$ - \$ 1,295 \$ - \$ 2,590 \$						T .				
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1 - 0.21 [volute map states	3.2j	Wave Trap Stand	0		\$ 5,550				\$ 11,100	

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	2	EA	\$ 18,500	\$ 37,000	\$ 18,500	\$ 37,000	\$ 37,000	\$ 74,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -		\$ -	\$ 37,000	
3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955		\$ 15,910	
3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -		\$ -	\$ 15,910	
3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -	\$ 3,330		\$ 6,660	
3.3f	Bus Support 1 Ph	4	EA	\$ 1,850	\$ 7,400		\$ 7,400		\$ 14,800
3.3g	Instrument Transformer Stand	6	EA	\$ 740	\$ 4,440		\$ 4,440	\$ 1,480	
3.3h	Arrester Stand	6	EA	\$ 740	\$ 4,440		\$ 4,440	\$ 1,480	
3.3j	Wave Trap Stand	2	EA	\$ 3,700			\$ 7,400	\$ 7,400	
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475		\$ 12,950	
5.5.0	Initial Structures	Ů		0,	Ÿ	ψ 0,5	,	Ų 12,550	*
TOTAL - SUBS	TATION STRUCTURES				\$ 60,680		\$ 60,680		\$ 121,360
4. MAJOR EQU					ψ 00,000		\$ 00,000		-
4.1	345kV								
4.1a	Circuit Breakers	0	EA	\$ 200,000	\$ -	\$ 80,000	\$ -	\$ 280,000	\$ -
4.1a 4.1b	Capacitor Banks	0	EA	\$ 200,000	\$ - \$ -		\$ -	\$ 280,000	
4.10 4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -		\$ -	\$ 750,000	•
		0	EA	\$ -	\$ -	. , , , , , , , , , , , , , , , , , , ,	·		•
4.1d	345 kV - 115 kV Auto Transformer	U	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	, -
4.2	230kV	0	FA.	ć 445.000	\$ -	ć 00.000	ć	ć 405.000	^
4.2a	Circuit Breakers	0	EA	\$ 115,000	Ÿ	\$ 80,000	\$ -	\$ 195,000	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	2	EA	\$ 52,000	\$ 104,000	\$ 60,000	\$ 120,000	\$ 112,000	
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
	OR EQUIPTMENT				\$ 104,000		\$ 120,000		\$ 224,000
	JIPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,000	\$ -		\$ -	\$ 55,000	
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	
5.1c	VT'S	0	EA	\$ 25,000	\$ -		\$ -	\$ 37,000	
5.1d	CT'S	0	EA	\$ 13,000	\$ -		\$ -	\$ 21,000	
5.1e	CCVT'S	0	EA	\$ 13,000			\$ -	\$ 21,000	
5.1f	Arresters	0	EA	\$ 6,500	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 8,000	·
5.1g	Wave Traps	0	EA	\$ 13,000			\$ -	\$ 21,000	
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -		\$ -	\$ 50,000	
5.2b	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2b 5.2c	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0	EA EA	\$ 30,000 \$ 13,000	\$ - \$ -	\$ 17,500 \$ 8,000	\$ - \$ -	\$ 47,500 \$ 21,000	\$ - \$ -
5.2b 5.2c 5.2d	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S	0 0 0	EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000	\$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000	\$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000	\$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	0 0 0	EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000	\$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000	\$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	0 0 0 0	EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000	\$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000	\$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	0 0 0	EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000	\$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000	\$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	0 0 0 0	EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000	\$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000	\$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	0 0 0 0 0	EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers	0 0 0 0 0	EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers	0 0 0 0 0	EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ -	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000 \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 7 \$ 7 \$ 7 \$ 7 \$ 7	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ - \$ 5 48,000 \$ 45,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ - \$ 28,000 \$ 28,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ - \$ 15,000 \$ 17,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ - \$ 48,000 \$ 45,500 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3a 5.3c 5.3d	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCT'S	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ - \$ 28,000 \$ 33,000 \$ 28,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ - \$ 48,000 \$ 45,500 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c 5.3c 5.3d 5.3e	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CC'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 13,000 \$ - \$ 33,000 \$ 28,000 \$ 13,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 7,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 16,000 \$ 16,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ - \$ 21,000 \$ 48,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3a 5.3c 5.3d	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCT'S	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ - \$ 28,000 \$ 33,000 \$ 28,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 7,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ 21,000 \$ - \$ 21,000 \$ 48,500 \$ 21,000 \$ 21,000 \$ 9,420	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c 5.3c 5.3d 5.3e	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 28,000 \$ 33,000 \$ 28,000 \$ 13,000 \$ 3,420	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 7 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ 21,000 \$ - \$ 21,000 \$ 21,000 \$ 45,500 \$ 21,000 \$ 21,000 \$ 9,420	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c 5.3d 5.3c 5.3d 5.3e 5.3f	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCT'S CCT'S CCT'S CCYT'S Arresters	0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 28,000 \$ 33,000 \$ 28,000 \$ 13,000 \$ 34,200 \$ 3,420	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 16,000 \$ 11,000 \$ 12,000 \$ 12,000 \$ - \$ - \$ 48,000 \$ 45,500 \$ 21,000 \$ 21,000 \$ 9,420	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.2b 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3 5.3a 5.3a 5.3c 5.3d 5.3e 5.3d 5.3e 5.3d 5.3e	Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CC'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 30,000 \$ 13,000 \$ 13,000 \$ 10,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 13,000 \$ 28,000 \$ 13,000 \$ 13,000 \$ 3,420 \$ 3,420 \$ 3,420 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000 \$ 15,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 47,500 \$ 21,000 \$ 21,000 \$ 16,000 \$ 11,000 \$ 21,000 \$ - \$ - \$ 48,000 \$ 45,500 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

							Labor & Equipment	Labor & Equipment			
Item	Item Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate	то	OTAL
	L EQUIPTMENT / MATERIALS					\$ 316,520		\$ 226,000		\$	542,520
6. CONTROL H	OUSE / PANELS / GENERATOR										
6.1	CONTROL HOUSE	0	EA	\$	551,250	\$ -	\$ 85,000	\$ -	\$ 636,250	\$	-
6.2	Protection and Telecom Equipment Panels	2	EA	\$	35,000	\$ 70,000	\$ 12,500	\$ 25,000	\$ 47,500	\$	95,000
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4	Control Cables	1	LS	\$	122,815	\$ 122,815	\$ 122,815	\$ 122,815	\$ 245,630	\$	245,630
6.5	SCADA and Communications	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
6.6	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.7	DC Distribution System	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000		-
6.8	Security	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.9	Fire Alarm	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$	-
	ROL HOUSE / PANELS / GENERATOR					\$ 192,815		\$ 147,815		\$	340,630
7. MISC ITEMS		530.0	I.E.	4	105.00	ć 00.0F0	ć 170.00	ć 00.100	ė ore	<u> </u>	100 150
7.1	Conduit & Cable Trench System	530.0	LF LF	\$	185.00	\$ 98,050 \$ -	\$ 170.00 \$ -	\$ 90,100 \$ -	\$ 355 \$ -	\$	188,150
7.2	Rigid Bus, Fittings & Insulators Strain Bus, Connectors & Insulators	300.0	LF	\$		•	т	•	\$ -		27,795
7.4		800.0	LF	\$	- 39.30	\$ 11,790	\$ 55.55	\$ 16,005	\$ 95	Ś	- 27,795
7.5	Grounding System Strain Bus Insulators - 345kV	0	EA	\$	2,000		\$ 1,050	т	\$ 3,050		
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400		\$ 750		\$ 2,150		
7.7	Strain Bus Insulators - 115kV	24	EA	\$	1,000			\$ 13,200	\$ 1,550		37,200
7.8	Low Voltage AC Station Service	0	LS	\$	50,000		\$ 75,000		\$ 125,000		-
7.9	SSVT Service	0	LS	\$	45,000				\$ 90,000		-
7.10	Control Conduits from Trench to Equipment	1	LS	\$	14,000		\$ 70,000		\$ 84,000		84,000
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	20,712		\$ 70,000	\$ 70,000	\$ 90,712		90,712
7.12					,		,	,	,	-	
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19				-							
7.20											
7.21											
7.22											
7.24											
7.25											
TOTAL - MISC	ITEMS					\$ 168,552		\$ 259,305		\$	427,857
										Ś	
	ack Substation - Install					\$ 1,048,307		\$ 1,041,050		Y	2,089,357
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
<u> </u>	Contractor Mobilization / Demobilization		10	,		<u></u>	¢ 20.000	ć 20.55:	¢ 20.55	<u> </u>	20.00
8.1	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 20,894	\$ 20,894	\$ 20,894	\$	20,894
-	Project Management, Material Handling & Amenities			-							
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 121,604	\$ 121,604	\$ 121,604	\$	121,604
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 20,894	\$ 20,894	\$ 20,894	Ś	20,894
		1	LS	\$		•	,		\$ 20,894		20,894
8.4	Site Accommodation, Facilities, Storage	1	LS	>	-	\$ -	\$ 20,894	ş 20,894	> 20,894	>	20,894
8.5	Engineering Design Engineering	1	LS	\$	-	\$ -	\$ 167,149	\$ 167,149	\$ 167,149	¢	167,149
8.6	LiDAR	-	Mile	\$				\$ 107,149		\$	107,149
8.7	Geotech	-	Site	\$				\$ -	\$ -	\$	
8.8	Surveying/Staking	1	Site	\$			\$ 14,625				14,625
	Testing & Commissioning			+			1,023		1,025	•	
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 52,234	\$ 52,234	\$ 52,234	\$	52,234
	Permitting and Additional Costs	_		Ť.			- ,	- ,	,		
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
	Environmental Mitigation	-	LS	\$	-			\$ -		\$	-
	·			•	-				•		25 -5 (0

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	l Supply Rate	Mate	erial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.12	Warranties / LOC's	1	LS	\$	-	\$	-	\$ 6,268	\$ 6,26	3 \$ 6,268	\$ 6,268
8.13	Real Estate Costs (New)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	83,865	\$	83,865	\$ -	\$ -	\$ 83,865	\$ 83,865
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS			\$	-	\$ -	\$ -	\$ -	\$ -
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$	83,865		\$ 424,56		\$ 508,425

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F. SS Schodack-Install

NAT - NYPA - T030 - (Segment B Enhanced) G. Schodack Substation - Removal

NAT - NYPA - T030 - (Segmen	nt B Enhanced)			
	Supply		Installation	Total
G. Schodack Substation - Removal				
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$ -		; -	\$ -
2. SUBSTATION FOUNDATIONS	\$ -		\$ 62,400	\$ 62,400
3. SUBSTATION STRUCTURES	\$ -	. !	\$ 73,800	\$ 73,800
4. MAJOR EQUIPTMENT	\$ -		; -	\$ -
5. SMALL EQUIPTMENT / MATERIALS	\$ -	. ;	; -	\$ -
6. CONTROL HOUSE / PANELS	\$ -		; -	\$ -
7. MISC ITEMS	\$ -		; -	\$ -
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 23,318
CONTRACTOR MARK-UP (OH&P)	\$ -	. ;	; -	\$ -
SUBTOTAL:	\$ -		\$ 136,200	\$ 159,518
CONTINGENCY ON ENTIRE PROJECT	\$ -	. ;	; -	\$ -
TOTAL:	\$ -		\$ 136,200	\$ 159,518

Description of	of Work:							
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate
G. Schod	ack Substation - Removal							

Total: \$ 159,518

G. SCHO	uack Substation - Keniovai								4 7		
1. SITE PREP	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	C	0	ACRES	\$ -	\$ -	\$ 203,000	\$ -	\$	203,000	\$ -
1.2	Station stone within substation fence.	C	0	CY	\$ -	\$ -	\$ 75	\$ -	\$	75	\$ -
1.3	Substation Fence	C	0	LF	\$ -	\$ -	\$ 150	\$ -	\$	150	\$ -
1.4								-			
1.5											
1.6								-			
1.7											
1.8								-			
1.9											
1.10								-			
1.11											
1.12											
1.13											
1.14											
1.15											
TOTAL - SITE	PREP/ GRADING/ FENCING / CIVIL					\$ -		\$ -			\$ -
2. SUBSTATIO	ON FOUNDATIONS										
2.1	345kV										
2.1a	Circuit Breaker Foundations	C	0	EA	\$ -	\$ -	\$ 14,200	\$ -	\$	14,200	\$ -
2.1b	Capacitor Bank Foundations	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1e	Switch Stand Foundations	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1f	Station Service Transformer Stand Foundation	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1g	Bus Support 3ph Foundations	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1h	Bus Support 1 Ph Foundations	C	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$	2,400	\$ -
2.1j	Instrument Transformer Stand Foundations	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1k	Arrester Stand Foundations	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1m	Wave Trap Stand Foundations	C	0	EA	\$	\$ -	\$ -	\$ -	\$	-	\$ -
2.1n	Misc. Structure Foundations	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.1p											
2.2	230kV										
2.2a	Circuit Breaker Foundations	C	0	EA	\$ -	\$ -	\$ 7,200	-	\$	7,200	-
2.2b	Capacitor Bank Foundations	C	0	EA	\$ -	\$ -	\$ 32,000	\$ -	\$	32,000	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	C	0	EA	\$ -	\$ -	\$ 22,000	-	\$	22,000	-
2.2d	Caisson DE Foundations (for DE A frame str shared column)	C	0	EA	\$ -	\$ -	\$ 11,000	\$ -	\$	11,000	\$ -
2.2e	Switch Stand Foundations	C	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$	5,200	\$ -
2.2f	Station Service Transformer Stand Foundation	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -
2.2g	Bus Support 3ph Foundations	C	0	EA	\$ -	\$ -	\$ -	\$ -	\$	-	\$ -

TOTAL

Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	
	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
	Circuit Breaker Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3h	Bus Support 1 Ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Instrument Transformer Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p	Steele Transmission Pole Dead Ends (1ph.) Foundations	6	EA	\$ -	\$ -	\$ 10,400	\$ 62,400	\$ 10,400	\$ 62,400
2.4	Townstown or Foundation								
	Transformer Foundations	0	EA.	\$ -	\$ -	ć	<u>^</u>	ć	^
	345-230kV Transformer Foundation w/ Oil Containment 345-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -
	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA			\$ 42,000		\$ 42,000	
	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ - \$ -	\$ - \$ -	\$ 42,000	\$ - \$ -	\$ 42,000	\$ - \$ -
2.40	113KV-05KV Transformer Foundation W/ On Containment	0	LA	· -	-	· -	-	, -	-
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad (40'x125')	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5b	Generator Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
	70' Lightning Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SUBST	ATION FOUNDATIONS				\$ -		\$ 62,400		\$ 62,400
3. SUBSTATION					· -		5 02,400		ÿ 02,400
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Switch Stands	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Station Service Transformer Stand	0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -		\$ -	\$ 2,250	·
	Bus Support 1 Ph	0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
	Instrument Transformer Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.0	22014								
	230kV Substation A Frame Structures Stand alone		E^	ć	ė	¢ 37,000	ć	ć 37.000	ć
	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA EA	\$ -	\$ - \$ -	\$ 27,000 \$ 27,000	\$ - \$ -	\$ 27,000 \$ 27,000	
	Switch Stands	0		\$ -	\$ -			\$ 27,000	
	Station Service Transformer Stand	0		\$ -			\$ -	\$ 9,750	
	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 1 Ph	0		\$ -		\$ 2,250		\$ 2,250	
	Instrument Transformer Stand	0		\$ -	·	\$ 1,050		\$ 1,050	
	Arrester Stand	0		\$ -	\$ -			\$ 1,050	
	Wave Trap Stand	0		\$ -	\$ -	\$ 4,500		\$ 4,500	
	Misc. Structures	0		\$ -	\$ -		\$ -		\$ -
		i	i			İ			

3.3b Sub: 3.3c Switi 3.3d Fuse 3.3e Bus 3.3f Bus 3.3f Max 3.3m Instrain 3.3h Arre 3.3 Wax 3.3k Mise TOTAL - SUBSTATIC 4. MAJOR EQUIPTN 4.1 345i 4.1a Crep 4.1b Cap: 4.1d 4.2 230i 4.2a Circe 4.2b Cap: 4.3a 115i 4.3a Circe	MENT SkV cuit Breakers pacitor Banks DkV cuit Breakers pacitor Banks	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 15,000 \$ - \$ 6,450 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 73,800
3.3c Swit 3.3d Fuse 3.3d Fuse 3.3d Fuse 3.3f Bus 3.3f Bus 3.3f Bus 3.3s Inst 3.3h Arrer 3.3j Wav 3.3k Misc TOTAL - SUBSTATIC 4. MAJOR EQUIPTN 4.1 345 4.1a Circi 4.1b Cap: 4.1c 4.1d 4.2 230 4.2 Circi 4.2b Cap: 4.3 115 4.3a Circi 4.3b Cap:	ititch Stands se Stand s Support 3ph s Support 1 Ph trument Transformer Stand rester Stand ave Trap Stand sc. Structures ON STRUCTURES MENT SokV cuit Breakers pacitor Banks OkV cuit Breakers pacitor Banks SokV cuit Breakers pacitor Banks	0 0 0 0 0 0 0 0 6	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 6,450 \$ - \$ - \$ - \$ - \$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 6,450 \$ - \$ - \$ - \$ - \$ - \$ - \$ 12,300 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ -
3.3d Fuse 3.3e Bus 3.3f Bus 3.3f Bus 3.3g Instr 3.3] Wav 3.3k Miso TOTAL - SUBSTATIC 4. MAJOR EQUIPTM 4.1 345i 4.1a Circi 4.1b Capi 4.1d 4.2 230i 4.2a Circca 4.2b Capi 4.3 115i 4.3a Circi 4.3b Capi	se Stand s Support 3ph s Support 1 Ph trument Transformer Stand rester Stand ave Trap Stand sc. Structures ON STRUCTURES MENT SokV cuit Breakers pacitor Banks OOKV cuit Breakers pacitor Banks SokV cuit Breakers pacitor Banks	0 0 0 0 0 0 0 6	EA EA EA EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ - \$ - \$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 - \$ 5 -
3.3e Bus 3.3f Bus 3.3g Insti 3.3h Arrea 3.3 Wax 3.3k Miso TOTAL - SUBSTATIC 4. MAJOR EQUIPTM 4.1 345i 4.1a Circ 4.1b Cap 4.1c 4.1d 4.2 230i 4.2c Circ 4.2b Cap 4.3 115i 4.3a Circ 4.3b Cap	s Support 3ph s Support 1 Ph trument Transformer Stand rester Stand ave Trap Stand sc. Structures ON STRUCTURES MENT SkV cuit Breakers pacitor Banks SkV cuit Breakers pacitor Banks	0 0 0 0 0 6	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ - \$ 73,800 \$ 73,800	\$ - \$ - \$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ - \$ -
3.3f Bus 3.3g Inst: 3.3h Arre 3.3j Wav 3.3k Miss TOTAL - SUBSTATIC 4. MAJOR EQUIPTM 4.1 345i 4.1a Circu 4.1b Cap. 4.1c 4.1d 4.2 230i 4.2a Circu 4.2b Cap. 4.3 115i 4.3a Circu 4.3b Cap.	ss Support 1 Ph trument Transformer Stand rester Stand sex Trap Stand sc. Structures ON STRUCTURES MENT SkV cuit Breakers pacitor Banks DkV cuit Breakers pacitor Banks SkV cuit Breakers pacitor Banks DkV cuit Breakers pacitor Banks	0 0 0 0 6	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ -	\$ - \$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ -
3.3g Insti 3.3h Arrer 3.3j Wav 3.3k Misc TOTAL - SUBSTATIC 4. MAJOR EQUIPTN 4.1 345 4.1a Circi 4.1b Cap: 4.1c 4.1d 4.2 230i 4.2a Circi 4.2b Cap: 4.3 115i 4.3a Circi 4.3b Cap:	trument Transformer Stand rester Stand save Trap Stand sc. Structures ON STRUCTURES MENT SSKV cuit Breakers pacitor Banks ObkV cuit Breakers pacitor Banks SKV cuit Breakers pacitor Banks	0 0 0 6	EA EA EA EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ 12,300	\$ - \$ - \$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ - \$ -	\$ - \$ - \$ 12,300	\$ - \$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ - \$ -
3.3h Arre 3.3j Wax 3.3k Miso TOTAL - SUBSTATIC 4. MAJOR EQUIPTM 4.1 345j 4.1a Circu 4.1b Capa 4.1c 4.1d 4.2 230j 4.2a Circu 4.2b Capa 4.3 115j 4.3a Circu 4.3b Capa	rester Stand ave Trap Stand sc. Structures ON STRUCTURES MENT SokV cuit Breakers pacitor Banks OOKV cuit Breakers pacitor Banks SokV cuit Breakers pacitor Banks	0 0 6	EA EA EA EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ 12,300 \$ - \$ 12,300	\$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ - \$ -	\$ - \$ 12,300 \$ - \$ 5 - \$ - \$ -	\$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ -
3.3j Wax 3.3k Miso 3.3k Miso 3.3k Miso 4.1a Substatic 4.1a Circt 4.1b Capi 4.1c 4.1d 4.2 230 4.2a Circt 4.2b Capi 4.3 115 4.3a Circt 4.3b Capi	ave Trap Stand sc. Structures ON STRUCTURES MENT SkV cuit Breakers pacitor Banks OkV cuit Breakers pacitor Banks SkV cuit Breakers	0 0 0 0 0	EA EA EA EA EA EA EA	\$ - \$ - \$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,300 \$ 12,300 \$ - \$ - \$ -	\$ - \$ 73,800 \$ 73,800 \$ - \$ - \$ -	\$ - \$ 12,300 \$ - \$ - \$ -	\$ 73,800 \$ 73,800 \$ - \$ - \$ - \$ -
3.3k Miss TOTAL - SUBSTATIC 4. MAJOR EQUIPTM 4.1 345i 4.1a Circra 4.1b Cap. 4.1c 4.1d 4.2 230i 4.2a Circra 4.2b Cap. 4.3 115i 4.3a Circra 4.3b Cap.	ON STRUCTURES MENT SkV cuit Breakers pacitor Banks DkV cuit Breakers pacitor Banks	0 0 0	EA EA EA EA	\$ - \$ - \$ - \$ -	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,300 \$ - \$ - \$ -	\$ 73,800 \$ 73,800 \$ - \$ - \$ -	\$ 12,300 \$ - \$ - \$ -	\$ 73,800 \$ 73,800 \$ - \$ - \$ -
TOTAL - SUBSTATIC 4. MAJOR EQUIPTN 4.1 3451 4.1a Circi 4.1b Capi 4.1c 4.1d 4.2 2301 4.2a Circi 4.2b Capi 4.3 1151 4.3a Circi 4.3b Capi	ON STRUCTURES MENT SkV cuit Breakers pacitor Banks OkV cuit Breakers pacitor Banks SkV cuit Breakers pacitor Banks	0 0 0	EA EA EA	\$ - \$	\$ - \$ - \$ - \$ -	\$ - \$ - \$ -	\$ 73,800 \$ - \$ - \$ -	\$ - \$ - \$ -	\$ 73,800 \$ - \$ - \$ -
4. MAJOR EQUIPTN 4.1 3451 4.1a Circc 4.1b Capi 4.1c 4.1d 4.2 2301 4.2a Circc 4.2b Capi 4.3 1151 4.3a Circc 4.3b Capi	MENT SkV cuit Breakers pacitor Banks OkV cuit Breakers pacitor Banks SkV cuit Breakers pacitor Banks	0 0	EA EA	\$ -	\$ - \$ - \$ -	\$ -	\$ - \$ - \$ -	\$ -	\$ - \$ - \$ -
4. MAJOR EQUIPTN 4.1 3451 4.1a Circc 4.1b Capi 4.1c 4.1d 4.2 2301 4.2a Circc 4.2b Capi 4.3 1151 4.3a Circc 4.3b Capi	MENT SkV cuit Breakers pacitor Banks OkV cuit Breakers pacitor Banks SkV cuit Breakers pacitor Banks	0 0	EA EA	\$ -	\$ - \$ - \$ -	\$ -	\$ - \$ - \$ -	\$ -	\$ - \$ - \$ -
4.1 345l 4.1a Circra 4.1b Cap: 4.1c 4.1d 4.2 230l 4.2a Circra 4.2b Cap: 4.3 115l 4.3a Circra 4.3b Cap:	SkV cuit Breakers pacitor Banks DkV cuit Breakers pacitor Banks SkV cuit Breakers	0 0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1a Circu 4.1b Capi 4.1c 4.1d 4.2 230i 4.2a Circu 4.2b Capi 4.3 115i 4.3a Circu 4.3b Capi	cuit Breakers pacitor Banks DkV cuit Breakers pacitor Banks SkV cuit Breakers	0 0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b Cap. 4.1c 4.1d 4.2 230II 4.2a Circra 4.2b Cap. 4.3 1151 4.3a Circc 4.3b Cap.	Dacitor Banks OkV cuit Breakers pacitor Banks SkV cuit Breakers	0 0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c 4.1d 4.2 230l 4.2a Circc 4.2b Cappi 4.3 1151 4.3a Circc 4.3b Capi	DkV cuit Breakers pacitor Banks SkV cuit Breakers	0 0	EA EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d 4.2 230l 4.2a Circr 4.2b Capi 4.3 115l 4.3a Circr 4.3b Capi	cuit Breakers pacitor Banks SkV cuit Breakers	0	EA	\$ -	\$ -				
4.2 2301 4.2a Circi 4.2b Cap: 4.3 1151 4.3a Circi 4.3b Cap:	cuit Breakers pacitor Banks SkV cuit Breakers	0		·	Т	ć 7,000		A 7000	•
4.2a Circi 4.2b Cap. 4.3 115i 4.3a Circi 4.3b Cap.	cuit Breakers pacitor Banks SkV cuit Breakers	0		·	Т	ć 7,000	,	¢	
4.2b Cap. 4.3 115i 4.3a Circi 4.3b Cap.	pacitor Banks SkV cuit Breakers	0		·	Т				
4.3 115 4.3a Circi 4.3b Capa	SkV cuit Breakers		EA	\$ -	1.6		\$ -	\$ 7,000	
4.3a Circi 4.3b Capa	cuit Breakers	0			\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3a Circi 4.3b Capa	cuit Breakers	0							
4.3b Capa		0				4		<u> </u>	A
·	pacitor Banks		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - MAJOR EQ		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - WAJOR EU	DUIDTMENT				\$ -		ć		\$ -
					\$ -		\$ -		\$ -
	MENT / MATERIALS								
5.1 345 5.1a Line		0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	e Switches - 3ph w/ motor operator								
5.1b Disc 5.1c VT'S	sconnect Switches - 3ph w/ manual operator	0	EA EA	\$ -	\$ - \$ -	\$ 5,500		\$ 5,500	\$ -
5.1d CT'S		0	EA	\$ -	\$ -	\$ -	1	\$ -	\$ -
5.10 CT S		0	EA	\$ -	\$ -	\$ 2,500	\$ - \$ -	\$ 2,500	\$ -
3.1e CCV	VIS	0	EA	, -	, -	\$ 2,300	, -	\$ 2,300	-
5.1f Arre	resters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g Way	ave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
	ntion Service Transformers	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1j	Rion service munisionners	•	LA	7	7	,	,	7	7
5.2,									
5.2 230	DkV								
	e Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
	connect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2c VT'S		0		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d CT'S		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e CCV		0	EA	\$ -	\$ -	•	\$ -	\$ 1,500	
	resters	0	EA	\$ -	\$ -	\$ 2,500		\$ 2,500	
	ave Traps	0	EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	
	ation Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
·									
5.3 115	5kV								
	e Switches - 3ph w/ motor operator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3b Disc	connect Switches - 3ph w/ manual operator	0	EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.3c VT'S		0	EA	\$ -	\$ -	\$ -	\$ -		\$ -
5.3d CT'S	'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3e CCV	VT'S	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3f Arre	resters	0	EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.3g Wav	ave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h Stat	ation Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j Fuse	ses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	QUIPTMENT / MATERIALS				\$ -		\$ -		\$ -
6. CONTROL HOUSE	SE / PANELS / GENERATOR								

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	CONTROL HOUSE	0	EA	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
6.2	Protection and Telecom Equipment Panels	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cable	0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security	0	EA	\$ -	· -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
0.20	- Contractor	<u> </u>	2,	<u> </u>	*	,	*	, v	*
TOTAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ -		\$ -		\$ -
7. MISC ITEMS					7		7		7
7.1	Conduit & Cable Trench System	0	EA	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.1	Rigid Bus, Fittings & Insulators	0	LS	\$ -	\$ -	\$ 10,500.00	\$ -	\$ 10,500	
7.2	Strain Bus, Connectors & Insulators	0	EA	\$ -	\$ -		\$ -	\$ 10,300	
7.4	Grounding System	0	EA	\$ -	\$ -	\$ 42,000.00		\$ 42,000	
	Grounding System	0	EA	, -	ş -	\$ 42,000.00	3 -	\$ 42,000	, -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ -		\$ -
	lack Substation - Removal				\$ -		\$ 136,200		\$ 136,200
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS: Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 1,362	\$ 1,362	\$ 1,362	\$ 1,362
0.1	Project Management, Material Handling & Amenities	1.0		1	7	7 1,502	7 1,502	7 1,502	7 1,502
	Project Wanagement, Waterial Handling & Americas								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 7,927	\$ 7,927	\$ 7,927	\$ 7,927
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 1,362	\$ 1,362	\$ 1,362	\$ 1,362
8.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 1,362		\$ 1,362	
	Engineering						,		,
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 10,896	\$ 10,896	\$ 10,896	\$ 10,896
8.6	LiDAR		Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking	-	Site	\$ -	š -	\$ 953	\$ -		\$ -
	Testing & Commissioning			<u> </u>	*	,	*	7	7
8.9	Testing & Commissioning Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 3,405	\$ -	\$ 3,405	\$ -
3.3	Permitting and Additional Costs	-		<u> </u>	-	5,403	· ·	5,403	*
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -		\$ 409		\$ 409
8.13	Real Estate Costs (New)	1	LS	\$ -	\$ -	\$ 409	\$ 409	\$ 409	\$ 409
			LS	<u> </u>	т				-
8.14	Real Estate Costs (Incumbent Utility)	1		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	7	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 136		\$ 136	
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ -		\$ 23,318		\$ 23,318

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H. Churchtown Substation - Install

Estimate	_	Takal.		10 750 615
Revision:	5	iotai:	Þ	18,759,615

NAT - NYPA - T030 - (Segment B Enhanced)											
		Supply	Insta	allation		Total					
H. Churchtown Substation - Install											
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	133,850	\$	2,459,550	\$	2,593,400					
2. SUBSTATION FOUNDATIONS	\$	964,690	\$	1,039,500	\$	2,004,190					
3. SUBSTATION STRUCTURES	\$	416,000	\$	433,085	\$	866,170					
4. MAJOR EQUIPTMENT	\$	416,000	\$	480,000	\$	896,000					
5. SMALL EQUIPTMENT / MATERIALS	\$	1,384,800	\$	938,800	\$	2,323,600					
6. CONTROL HOUSE / PANELS	\$	2,344,525	\$	1,517,025	\$	3,861,550					
7. MISC ITEMS	\$	1,013,691	\$	1,488,020	\$	2,501,711					
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	535,251	\$	3,177,743	\$	3,712,994					
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-					
SUBTOTAL:	\$	7,208,807	\$	11,533,723	\$	18,759,615					
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-					
TOTAL:	\$	7,208,807	\$	11,533,723	\$	18,759,615					

D	es	crı	pt	ıon	ot	w	or	k:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
H. Churc	htown Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	2.0	ACRES	\$ -	\$ -	\$ 1,125,000	\$ 2,250,000	\$ 1,125,000	\$ 2,250,000
1.2	Station stone within substation fence.	900	CY	\$ 27	\$ 24,300	\$ 75	\$ 67,500	\$ 102	\$ 91,800
1.3	Substation Fence	1,050	LF	\$ 100	\$ 105,000	\$ 100	\$ 105,000	\$ 200	\$ 210,000
1.4	Permanent Access Road - 20'-Wide	130	LF	\$ 35	\$ 4,550	\$ 285	\$ 37,050	\$ 320	\$ 41,600
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
	REP/ GRADING/ FENCING / CIVIL				\$ 133,850		\$ 2,459,550		\$ 2,593,400
	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ 14,940		\$ 16,000		\$ 30,940	
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,025		\$ 60,000		\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,145			\$ -	\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,145		,	\$ -	\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	\$ 4,482		7 .,	\$ -	\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,482		\$ 4,800		\$ 9,282	
2.1g	Bus Support 3ph Foundations	0	EA	\$ -		\$ -	\$ -		\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,482	\$ -	\$ 4,800	·	\$ 9,282	
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,482	Ş -	\$ 4,800	\$ -	\$ 9,282	
2.1k	Arrester Stand Foundations	0	EA	\$ 4,482	<u> </u>	7 .,	\$ -	\$ 9,282	
2.1m	Wave Trap Stand Foundations	0	EA	\$ 4,482		, ,,,,,	\$ -	\$ 9,282	
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44.820	\$ -	\$ 48,000	Ś -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -		\$ -	\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410			\$ -	\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,735		\$ 4,000	\$ -	\$ 7,735	
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735				\$ 7,735	
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			· ·	1 .	· ·			Page 21 of 60

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
	Circuit Breaker Foundations	8	EA	\$ 5,229	\$ 41,832	\$ 5,600	\$ 44,800	\$ 10,829	\$ 86,632
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -		\$ -	\$ 69,615	
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	20	EA	\$ 16,434	\$ 328,680		\$ 352,000	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	32	EA	\$ 2,988	\$ 95,616	\$ 3,200	\$ 102,400	\$ 6,188	\$ 198,016
2.3f	Fuse Stand Foundations	2	EA	\$ 2,988	\$ 5,976			\$ 6,188	
	Bus Support 3ph Foundations	40	EA	\$ 2,988	\$ 119,520		\$ 128,000	\$ 6,188	
	Bus Support 1 Ph Foundations	24	EA	\$ 2,988	\$ 71,712		\$ 76,800	\$ 6,188	
2.3j	Instrument Transformer Stand Foundations	51	EA	\$ 2,988	\$ 152,388		\$ 163,200	\$ 6,188	
2.3k	Arrester Stand Foundations	15	EA	\$ 2,988	\$ 44,820		\$ 48,000	\$ 6,188	
2.3m 2.3n	Wave Trap Stand Foundations	10	EA EA	\$ 2,988 \$ 3,735	\$ 29,880 \$ 3,735		\$ 32,000 \$ 4,000	\$ 6,188 \$ 7,735	
	Station Service Foundations Miss. Structure Foundations	0	EA EA	\$ 3,735	\$ 3,/35	\$ 4,000	\$ 4,000	\$ 7,735 \$ -	\$ 7,735
2.3p	Misc. Structure Foundations	0	ĽA	-	- -	- -	-	· -	-
2.4	Transformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5	Control House Foundations / Pad								4
2.5a	Control House / Pad	1	EA	\$ 33,615	\$ 33,615		\$ 36,000	\$ 69,615	
2.5b 2.5c	Generator Foundation Station Service Distributuion Line - 1ph.	1	EA LS	\$ 16,000	\$ 16,000 \$ -	\$ 17,000 \$ 6,500	\$ 17,000 \$ 6,500	\$ 33,000 \$ 6,500	\$ 33,000 \$ 6,500
2.6	Lightning Mast Foundations	1	LS	5 -	, -	\$ 0,500	\$ 0,500	\$ 0,500	\$ 6,500
2.6a	70' Lightning Mast Foundation	4	EA	\$ 5,229	\$ 20,916	\$ 5,600	\$ 22,400	\$ 10,829	\$ 43,316
2.6b	70 Eightimig Mast Foundation	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
	ATION FOUNDATIONS				\$ 964,690		\$ 1,039,500		\$ 2,004,190
3. SUBSTATION									
	345kV				·			·	
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	
	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
3.1c 3.1d	Switch Stands Station Service Transformer Stand	0	EA EA	\$ 14,800 \$ 14,800	\$ - \$ -		\$ - \$ -	\$ 29,600 \$ 29,600	
	Bus Support 3ph	0	EA EA	\$ 14,800	·		\$ -	\$ 29,600	\$ -
	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -		\$ -	\$ 7,400	•
3.1g	Instrument Transformer Stand	0	EA	\$ 1,850			\$ -	\$ 3,700	
	Arrester Stand	0	EA	\$ 1,850	\$ -		\$ -	\$ 3,700	
	Wave Trap Stand	0	EA	\$ 7,400	\$ -	\$ 7,400	\$ -	\$ 14,800	\$ -
3.1k	Lightning Masts - 70'	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
	20011/								
3.2 3.2a	230kV Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	Š -	\$ 33,300	\$ -	\$ 66,600	\$ -
	Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0	EA EA	\$ 33,300	\$ - \$ -		\$ - \$ -	\$ 66,600	•
	Switch Stands	0		\$ 33,300	т			\$ 24,050	
	Station Service Transformer Stand	0	EA	\$ 12,025		\$ 12,025		\$ 24,050	
	Bus Support 3ph	0		\$ -	\$ -		\$ -	\$ -	
	Bus Support 1 Ph	0	EA	\$ 2,775		\$ 2,775		\$ 5,550	
	Instrument Transformer Stand	0		\$ 1,295	\$ -			\$ 2,590	
	Arrester Stand	0	EA	\$ 1,295		\$ 1,295		\$ 2,590	
3.2j	Wave Trap Stand	0	EA	\$ 5,550			\$ -	\$ 11,100	
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								

3.10	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
1.3 Miles Sacce 1	3.3a	Substation A-Frame Structures - Stand alone	5	EA	\$ 18,50	92,500	\$ 18,500	\$ 92,500	\$ 37,000	\$ 185,000
1	3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,50) \$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.15 Markinger bar 2.25 TA 5 1.00 5 6.600 5 4.600 5 4.600 5 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000	3.3c	Switch Stands	16	EA		5 \$ 127,280	\$ 7,955	\$ 127,280	\$ 15,910	\$ 254,560
3. M. Authorite Transformer Standard 3. M. 5		Fuse Stand			<u> </u>			· ,		
2.2 Mathematic Transformed started 22 EA 5 760 5 27,700 5 27,700 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5 2,000 5										
3										
3.3 Wave Trap Stater										
3.3									,	
3.1 Sates Service Transformer's Injector Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's Service Transformer's										
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4.13						\$ 455,065		\$ 455,065		\$ 800,170
4.1 Corport Densis										
4.10 Add Capacitir feaks 0 LA 5 5 5 5 5000 5 5 5 5000 5 5			0	FA	\$ 200.00) \$ -	\$ 80,000	\$ -	\$ 280,000	\$ -
Act Select 2-Day Not presented D EA S S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE S PAGE								T .		
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4.20 Capacit Browlers 0 GA S 115,000 S S 80,000 S S \$185,000 S S 4.20 Capacitor Banks 0 GA S S S S S S S S 4.20 Capacitor Banks 0 GA S S S S S S 4.31 Capacitor Banks 0 GA S S S S S 4.32 Capacitor Banks 0 GA S S S S S 4.33 Capacitor Banks 0 GA S S S S S 4.34 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S 5.35 Capacitor Banks 0 GA S S S S 5.35 Capacitor Banks 0 GA S S S S 5.35 Capacitor Banks 0 GA S S S S 5.35 Capacitor Banks 0 GA S S S S 5.35 Capacitor Banks 0 GA S S S S 5.35 Capacitor Banks 0 GA S S S S 5.35 Capacitor Banks 0 GA S S S S S 5.35 Capacitor Banks 0 GA S S S S S 5.35 Capacitor Banks 0 GA S S S S S 5.35 Capacitor Banks 0 GA S S S S S 5.35 Capacitor Banks 0 GA S S S S S S 5.35 Capacitor Banks 0 GA S S S S S S 5.35 Capacitor Banks 0 GA S S S S S S 5.35 Capacitor Banks 0 GA S S S S S S 5.35 Capacitor Banks 0 GA S S S S S S S 5.35 Capacitor Banks 0 GA S S S S S S S S 5.35 Capacitor Banks						İ				
4.3			0	EA	\$ 115,00) \$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
A3 1549			0	EA			\$ 80,000	\$ -		
4.3 Carcul Breakers 8 EA 5 5,000 5 416,000 5 5 6,000 5 12,000 5 886,000 5 12,000 5 886,000 5 12,000 5 886,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000 5 12,000										
4.3 Capacter Banks	4.3	115kV								
TOTAL-MADE SQUPTMENT MATERIALS	4.3a	Circuit Breakers	8	EA	\$ 52,00	\$ 416,000	\$ 60,000	\$ 480,000	\$ 112,000	\$ 896,000
S.MAIL EQUIPMENT / Marker S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1	4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
S.MAIL EQUIPMENT / Marker S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1 S.1										
S-1 345V						\$ 416,000		\$ 480,000		\$ 896,000
5.1										
Solit Disconnect Switches - 3ph w/ manual operator								_		1
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5.2a Line Switches - 3ph w/ motor operator 0 EA 5 35,000 5 - 5 5,000 5 - 5	,									
S.2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 30,000 \$ - \$ 47,500 \$ - 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5 5,20 \$ 5	5.2	230kV								
S2C	5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,00) \$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
S.2d CTS 0 EA S 13,000 S - S 8,000 S - S 21,000 S -	5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,00) \$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
S.2e CCVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'S CVT'	5.2c		0				\$ 8,000	\$ -	\$ 21,000	\$ -
S.2f								\$ -		
S.2g Wave Traps								'		•
S.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$										
5.2j 115kV 5.3a Line Switches - 3ph w/ motor operator 5 EA \$ 33,000 \$ 165,000 \$ 15,000 \$ 75,000 \$ 48,000 \$ 240,000 5.3b Disconnect Switches - 3ph w/ manual operator 16 EA \$ 28,000 \$ 448,000 \$ 17,500 \$ 280,000 \$ 45,500 \$ 728,000 5.3c VT'S 15 EA \$ 13,000 \$ 195,000 \$ 8,000 \$ 120,000 \$ 21,000 \$ 315,000 5.3e CT'S 15 EA \$ 13,000 \$ 195,000 \$ 8,000 \$ 120,000 \$ 21,000 \$ 315,000 5.3e CCVT'S 21 EA \$ 8,000 \$ 168,000 \$ 168,000 \$ 168,000 \$ 168,000 \$ 168,000 \$ 168,000 \$ 94,000 \$ 336,000 5.3f Arresters 15 EA \$ 3,420 \$ 51,300 \$ 90,000 \$ 94,200 \$ 144,300 \$ 168,000 \$ 90,000 \$ 94,200 \$ 316,000 \$ 316,000 \$ 168,000 \$ 90,000 \$ 94,20 \$ 144,300 \$ 10,000 \$ 10,000 \$ 10,00							7	т		
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5.3c VT'S 15 EA \$ 13,000 \$ 195,000 \$ 8,000 \$ 120,000 \$ 21,000 \$ 315,000 5.3d CT'S 15 EA \$ 13,000 \$ 195,000 \$ 8,000 \$ 120,000 \$ 21,000 \$ 315,000 5.3e CCVT'S 21 EA \$ 8,000 \$ 168,000 \$ 8,000 \$ 16,000 \$ 336,000 5.3f Arresters 15 EA \$ 3,420 \$ 51,300 \$ 6,000 \$ 90,000 \$ 9,420 \$ 141,300 5.3g Wave Traps 5 EA \$ 13,000 \$ 65,000 \$ 8,000 \$ 10,000 \$ 110,000 \$ 110,000 \$ 110,000 \$ 110,000 \$ 110,000 \$ 110,000 \$ 110,000 \$ 110,000 \$										
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	5.3h	Station Service Transformers	1	EA	\$ 75,00	5 75,000	\$ 35,000	\$ 35,000	\$ 110,000	\$ 110,000
	5.3j	Fuses	3	EA	\$ 7,50) \$ 22,500	\$ 3,600	\$ 10,800	\$ 11,100	\$ 33,300
TOTAL - SMALL EQUIPTMENT / MATERIALS \$ 938,800 \$ 2,323,600										
	TOTAL - SMAL	. EQUIPTMENT / MATERIALS				\$ 1,384,800		\$ 938,800		\$ 2,323,600

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ 292,500	\$ 292,500	\$ 85,000	\$ 85,000	\$ 377,500	\$ 377,500
6.2	Protection and Telecom Equipment Panels	30	EA	\$ 35,000	\$ 1,050,000	\$ 10,000	\$ 300,000	\$ 45,000	\$ 1,350,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000			\$ 100,000	\$ 200,000
	Control Cables	1	LS	\$ 487,025	\$ 487,025			\$ 974,050	\$ 974,050
6.5	SCADA and Communications	1	EA	\$ 50,000	\$ 50,000	\$ 100,000	\$ 100,000	\$ 150,000	\$ 150,000
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
	DC Distribution System	2	EA	\$ 50,000	\$ 100,000		·	\$ 150,000	
	Security	1	EA	\$ 7,500	\$ 7,500		\$ 7,500	\$ 15,000	\$ 15,000
	Fire Alarm	1	EA EA	\$ 7,500	\$ 7,500		\$ 7,500	\$ 15,000 \$ 180.000	\$ 15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
TOTAL - CONT	 ROL HOUSE / PANELS / GENERATOR				\$ 2,344,525		\$ 1,517,025		\$ 3,861,550
7. MISC ITEMS					2,344,323		1,517,025		Ç 3,001,330
	Conduit & Cable Trench System	1,300.0	LF	\$ 185.00	\$ 240,500	\$ 170.00	\$ 221,000	\$ 355	\$ 461,500
	Rigid Bus, Fittings & Insulators	1,800.0	LF	\$ 125.07	\$ 225,126			\$ 362	\$ 651,906
7.3	Strain Bus, Connectors & Insulators	1,000.0	LF	\$ 39.30	\$ 39,300	\$ 53.35	\$ 53,350	\$ 93	\$ 92,650
	Grounding System	10,500.0	LF	\$ 6.93	\$ 72,765			\$ 40	
	Strain Bus Insulators - 345kV	0	EA	\$ 2,000	\$ -			\$ 3,050	
	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -			\$ 2,150	
	Strain Bus Insulators - 115kV	36	EA	\$ 1,000	\$ 36,000			\$ 1,550	
	Low Voltage AC Station Service	1	LS	\$ 50,000	\$ 50,000		\$ 75,000	\$ 125,000	
	SSVT Service	1	LS	\$ 45,000	\$ 45,000			\$ 90,000	
	Control Conduits from Trench to Equipment	1	LS	\$ 125,000	\$ 125,000		\$ 125,000	\$ 250,000	
	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$ 360,000
7.12 7.13									
7.13									
7.15									
7.16									
7.17									
7.18									
7.19									
7.20									
7.21									
7.22									
7.23									
7.24									
7.25	 TEMS				ć 1012.001		ć 4.400.000		ć 2504.744
					\$ 1,013,691		\$ 1,488,020		\$ 2,501,711
H. Churc	htown Substation - Install				\$ 6,690,641		\$ 8,355,980		\$ 15,046,621
8. MOB/DEMC	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 150,466	\$ 150,466	\$ 150,466	\$ 150,466
	Project Management, Material Handling & Amenities								
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 875,736	\$ 875,736	\$ 875,736	\$ 875,736
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 150,466	\$ 150,466	\$ 150,466	\$ 150,466
	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 150,466			
	Engineering	_	-			,.00	, ••	,.	,
	Design Engineering	1	LS	\$ -	\$ -	\$ 1,203,730	\$ 1,203,730	\$ 1,203,730	\$ 1,203,730
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Geotech	4	Site	\$ -	\$ -				
	Surveying/Staking	1	Site	\$ -	- \$	\$ 105,326	\$ 105,326	\$ 105,326	\$ 105,326

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rat	e Ma	1aterial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
	Testing & Commissioning										
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 376,166	\$ 376,166	\$ 376,166	\$	376,166
	Permitting and Additional Costs										
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation		LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 45,140	\$ 45,140	\$ 45,140	\$	45,140
8.13	Real Estate Costs (New)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$	-	\$ 91,200	\$ 91,200	\$ 91,200	\$	91,200
8.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
8.18	Sales Tax on Materials	1	LS	\$ 535,25	1 \$	535,251	\$ -	\$ -	\$ 535,251	\$	535,251
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 15,047	\$ 15,047	\$ 15,047	\$	15,047
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	535,251		\$ 3,177,743		\$	3,712,994

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I. Churchtown Substation - Removal

Estimate Revision: 5 Total: \$ 1,128,661

NAT - NYPA - T030 - (Segment B Enhanced)											
	Supply		Installation		Total						
I. Churchtown Substation - Removal											
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$		\$ 111,000	\$	111,000						
2. SUBSTATION FOUNDATIONS	\$	-	\$ 340,400	\$	340,400						
3. SUBSTATION STRUCTURES	\$		\$ 252,600	\$	252,600						
4. MAJOR EQUIPTMENT	\$		\$ 24,600	\$	24,600						
5. SMALL EQUIPTMENT / MATERIALS	\$		\$ 60,000	\$	60,000						
6. CONTROL HOUSE / PANELS	\$		\$ 150,000	\$	150,000						
7. MISC ITEMS	\$		\$ 25,078	\$	25,078						
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	-	\$ 164,983	\$	164,983						
CONTRACTOR MARK-UP (OH&P)	\$		\$ -	\$	-						
SUBTOTAL:	\$	-	\$ 1,128,661	\$	1,128,661						
CONTINGENCY ON ENTIRE PROJECT	\$		\$ -	\$	-						
TOTAL:	\$	-	\$ 1,128,661	\$	1,128,661						

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
I. Church	ntown Substation - Removal								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.		ACRES	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -
1.2	Station stone within substation fence.		СУ	\$ -	\$ -	\$ 75	\$ -	\$ 75	\$ -
1.3	Substation Fence	740	LF	\$ -	\$ -	\$ 150	\$ 111,000	\$ 150	\$ 111,000
1.4									
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11									
1.12									
1.13									
1.14									
1.15									
TOTAL - SITE F	PREP/ GRADING/ FENCING / CIVIL				\$ -		\$ 111,000		\$ 111,000
2. SUBSTATIO	N FOUNDATIONS								
2.1	345kV								
2.1a	Circuit Breaker Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1b	Capacitor Bank Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1e	Switch Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1f	Station Service Transformer Stand Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1g	Bus Support 3ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1j	Instrument Transformer Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1k	Arrester Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1m	Wave Trap Stand Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1n	Reactor Foundations		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2	230kV								
2.2a	Circuit Breaker Foundations		EA	\$ -	\$ -	\$ 7,200	\$ -	\$ 7,200	\$ -
2.2b	Capacitor Bank Foundations		EA	\$ -	\$ -		\$ -	\$ 32,000	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ -	\$ -	\$ 22,000	\$ -	\$ 22,000	\$ -
2.2d	Caisson DE Foundations (for DE A frame str stand alone)		EA	\$ -	\$ -	\$ 11,000	\$ -	\$ 22,000	•
2.2u 2.2e	Switch Stand Foundations		EA	\$ -	\$ -	\$ 5,200	\$ -	\$ 5,200	\$ -
2.2f	Station Service Transformer Stand Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2g 2.2h	Bus Support 3ph Foundations		EA	\$ -	\$ -	\$ 2,400	\$ -	\$ 2,400	\$ -
	Bus Support 1 Ph Foundations		EA	\$ - \$ -	\$ -	,	\$ -	\$ 2,400	\$ -
2.2j 2.2k	Instrument Transformer Stand Foundations		EA	\$ -	\$ - \$ -	\$ 2,400 \$ 2,400	\$ -	\$ 2,400	\$ - \$ -
	Arrester Stand Foundations		EA	1	·	, , , , , ,	'	,	•
2.2m	Wave Trap Stand Foundations				T			'	\$ -
2.2n 2.2p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2μ									
2.3	115kV								
2.3a	Circuit Breaker Foundations	2	EA	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ 30,000
2.3b	Capacitor Bank Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3e	Switch Stand Foundations	18	EA	\$ -	\$ -	\$ 5,200	\$ 93,600	\$ 5,200	\$ 93,600
2.3f	Fuse Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3g 2.3h	Bus Support 1 Ph Foundations	6	EA	\$ -	\$ -	\$ 5,200	\$ 31,200	\$ 5,200	\$ 31,200
2.3j	Instrument Transformer Stand Foundations	3	EA	\$ -	\$ -	\$ 5,200	\$ 15,600	\$ 5,200	\$ 15,600
2.3k	Arrester Stand Foundations	0	EA	\$ -	\$ -	\$ 5,200	\$ 15,000	\$ -	\$ -
2.3m	Wave Trap Stand Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3m	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3n	Steel Transmission Pole Deadend Fnds (1Ph)	9	EA	\$ -	\$ -	\$ 15,000	\$ 135,000	\$ 15,000	\$ 135,000
2.56	Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Section and Sectio		271	<u> </u>	·	Ų 13,000	ψ 155,000	7 13,000	Ţ 155,600
2.4	Transformer Foundations								
2.4a	345-230kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4b	345-115kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ 67,500	\$ -	\$ 67,500	\$ -
2.4d	115kV-69kV Transformer Foundation w/ Oil Containment		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	·								
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ -	\$ -	\$ 14,200	\$ 14,200	\$ 14,200	\$ 14,200
2.5b	Generator Foundation		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	4	EA	\$ -	\$ -	\$ 5,200	\$ 20,800	\$ 5,200	\$ 20,800
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ -		\$ 340,400		\$ 340,400
	N STRUCTURES								
3.1	345kV							·	
3.1a	Substation A-Frame Structures - Stand alone		EA	\$ -	\$ -		\$ -		\$ -
3.1b	Substation A-Frame Structures - Shared Column		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.1c	Switch Stands		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1d	Station Service Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1e	Bus Support 3ph		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1f	Bus Support 1 Ph		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1g	Instrument Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1h	Arrester Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1j	Wave Trap Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.1k	Misc. Structures		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2	230kV								
3.2a	Substation A-Frame Structures - Stand alone		EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2b	Substation A-Frame Structures - Shared Column		EA	\$ -	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -
3.2c	Switch Stands		EA	\$ -	\$ -	\$ 9,750	\$ -	\$ 9,750	\$ -
3.2d	Station Service Transformer Stand		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.2e	Bus Support 3ph		EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	\$ -
3.2f	Bus Support 1 Ph		EA	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	
3.2g	Instrument Transformer Stand		EA	\$ -	\$ -	\$ 1,050	\$ -	\$ 1,050	\$ -
3.2h	Arrester Stand		EA	\$ -	\$ -	\$ 1,050	\$ -	\$ 1,050	\$ -
3.2j	Wave Trap Stand		EA	\$ -	\$ -	\$ 4,500	\$ -	\$ 4,500	
3.2k	Misc. Structures		EA	\$ -	\$ -	\$ 4,300	\$ -	\$ -	\$ -
3.2K	IVISC. Structures		EA	-	, -	-	-	-	-
3.3	115kV								
		0	EA.	ć	ć	\$ 15,000	ć	\$ 15,000	
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ -	\$ -		\$ -		\$ -
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3c	Switch Stands	9	EA	\$ -	\$ -	\$ 6,450	\$ 58,050	\$ 6,450	\$ 58,050
3.3d	Fuse Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3f	Bus Support 1 Ph	6	EA	\$ -	\$ -	\$ 6,450	\$ 38,700	\$ 6,450	\$ 38,700
3.3g	Instrument Transformer Stand	3	EA	\$ -	\$ -	\$ 6,450	\$ 19,350	\$ 6,450	
3.3h	Arrester Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3j	Wave Trap Stand	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3.3k	Steel Transmission Pole Deadend (1Ph)	9	EA	\$ -	\$ -	\$ 12,300	\$ 110,700	\$ 12,300	\$ 110,700
3.41	Lightning Mast	4	EA	\$ -	\$ -	\$ 6,450	\$ 25,800	\$ 6,450	\$ 25,800
TOTAL - SUBST	TATION STRUCTURES				\$ -		\$ 252,600		\$ 252,600
4. MAJOR EQU	IPTMENT								
4.1	345kV								
4.1a	Circuit Breakers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1b	Capacitor Banks		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1c			EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.1d									
4.2	230kV								
4.2a	Circuit Breakers		EA	\$ -	\$ -	\$ 7,000	\$ -	\$ 7,000	\$ -
4.2b	Capacitor Banks		EA	\$ -	\$ -	\$ 42,000	\$ -	\$ 42,000	\$ -
4.3	115kV								
4.3a	Circuit Breakers	2	EA	\$ -	\$ -	\$ 12,300	\$ 24,600	\$ 12,300	\$ 24,600
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - MAIO	I R EQUIPTMENT				\$ -		\$ 24,600		\$ 24,600
	IPTMENT / MATERIALS						24,300		24,300
	345kV								

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.1a	Line Switches - 3ph w/ motor operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.1c	VT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1d	CT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1e	CCVT'S		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1f	Arresters		EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.1g	Wave Traps		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.1h	Station Service Transformers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator		EA	\$ -	\$ -	\$ 5,500	\$ -	\$ 5,500	\$ -
5.2c	VT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2d	CT'S		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2e	CCVT'S		EA	\$ -	\$ -	\$ 1,500	\$ -	\$ 1,500	\$ -
5.2f	Arresters		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2g	Wave Traps		EA	\$ -	\$ -	\$ 2,500	\$ -	\$ 2,500	\$ -
5.2h	Station Service Transformers		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,50
5.3b	Disconnect Switches - 3ph w/ manual operator	3	EA	\$ -	\$ -	\$ 5,500	\$ 16,500	\$ 5,500	\$ 16,50
5.3c	VT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,50
5.3d	CT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,50
5.3e	CCVT'S	3	EA	\$ -	\$ -	\$ 1,500	\$ 4,500	\$ 1,500	\$ 4,50
5.3f	Arresters	9	EA	\$ -	\$ -	\$ 1,500	\$ 13,500	\$ 1,500	\$ 13,50
5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - SMAL	I L EQUIPTMENT / MATERIALS				\$ -		\$ 60,000		\$ 60,00
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,00
6.2	Protection and Telecom Equipment Panels		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.3	125VDC Batteries		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.4	Control Cables		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.5	SCADA and Communications		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.7	DC Distribution System		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.8	Security		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.9	Fire Alarm		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.10	Generator		EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL - CONT	I ROL HOUSE / PANELS / GENERATOR				\$ -		\$ 150,000		\$ 150,00
7.1	Conduit & Cable Trench System		LS	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.2	Rigid Bus, Fittings & Insulators	535.0	LF	\$ -	\$ -	\$ 46.88	\$ 25,078	\$ 47	\$ 25,07

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
7.3	Strain Bus, Connectors & Insulators		LF	\$ -	\$ -	\$ 39.35	\$ -	\$ 39	\$ -
7.4	Grounding System		LS	\$ -	\$ -	\$ 42,000.00	\$ -	\$ 42,000	\$ -
7.5									
7.6									
7.7									
7.8									
7.9									
7.10									
7.11									
7.12									
7.13									
7.14									
7.15									
TOTAL - MISC	ITEMS				\$ -		\$ 25,078		\$ 25,078
I. Church	ntown Substation - Removal				\$ -		\$ 963,678		\$ 963,678
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 9,637	\$ 9,637	\$ 9,637	\$ 9,637
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 56,088	\$ 56,088	\$ 56,088	\$ 56,088
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 9,637	\$ 9,637	\$ 9,637	\$ 9,637
8.4	Site Accommodation, Facilities, Storage	1.0	LS	\$ -	\$ -	\$ 9,637	\$ 9,637	\$ 9,637	\$ 9,637
	Engineering								
8.5	Design Engineering	1.0	LS	\$ -	\$ -	\$ 77,094	\$ 77,094	\$ 77,094	\$ 77,094
8.6	LiDAR	-	Mile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.7	Geotech	-	Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.8	Surveying/Staking	-	Site	\$ -	\$ -	\$ 6,746	\$ -	\$ 6,746	\$ -
	Testing & Commissioning								
8.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ 24,092	\$ -	\$ 24,092	\$ -
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 2,891	\$ 2,891	\$ 2,891	\$ 2,891
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17	5	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1.0	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.19	Fees for permits, including roadway, railroad, building or other local permits	-	LS		\$ -	\$ 964		\$ 964	\$ -
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				ļ \$ -		\$ 164,983		\$ 164,983

NAT - NYPA - T030 - (Segment B Enhanced) J. Pleasant Valley Substation - Install

Total: \$ 3,490,140

NAT - NYPA - T030 - (Segment B Enh	anced)			
		Supply	Installation		Total
J. Pleasant Valley Substation - Install					
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	11,025	\$ 14,625	\$	25,650
2. SUBSTATION FOUNDATIONS	\$	151,466	\$ 160,900	\$	312,366
3. SUBSTATION STRUCTURES	\$	44,400	\$ 44,400	\$	88,800
4. MAJOR EQUIPTMENT	\$	200,000	\$ 80,000	\$	280,000
5. SMALL EQUIPTMENT / MATERIALS	\$	260,500	\$ 129,000	\$	389,500
6. CONTROL HOUSE / PANELS	\$	560,900	\$ 253,400	\$	814,300
7. MISC ITEMS	\$	409,950	\$ 457,275	\$	867,225
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	131,059	\$ 581,239	\$	712,299
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	1,769,300	\$ 1,720,839	\$	3,490,140
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
TOTAL:	Ś	1.769.300	\$ 1.720.839	Ś	3.490.140

Descr	iptic	on of	Wo	rk:

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply	Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	то	OTAL
J. Pleasa	nt Valley Substation - Install										
1. SITE PREP/	GRADING/ FENCING / CIVIL										
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 203,000	\$ -	\$ 203,000	\$	-
1.2	Station stone within substation fence.	75	CY	\$	27	\$ 2,025	\$ 75	\$ 5,625	\$ 102	\$	7,650
1.3	Substation Fence	90	LF	\$	100	\$ 9,000	\$ 100	\$ 9,000	\$ 200	\$	18,000
1.4	Permanent Access Road - 20'-Wide	0	LF	\$			\$ 285		\$ 320	\$	-
1.5											
1.6											
1.7											
1.8											
1.9											
1.10											
1.11											
1.12											
1.13											
1.14											
1.15											
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 11,025		\$ 14,625		Ś	25,650
2. SUBSTATIO	FOUNDATIONS							,			
2.1	345kV										
2.1a	Circuit Breaker Foundations	1	EA	\$ 14	1,940	\$ 14,940	\$ 16,000	\$ 16,000	\$ 30,940	\$	30,940
2.1b	Capacitor Bank Foundations	0	EA	\$ 56	5,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$	-
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26	5,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$	-
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26	5,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$	
	Switch Stand Foundations	6	EA	\$ 4	1,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$	55,692
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4	1,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4	1,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$	-
2.1j	Instrument Transformer Stand Foundations	9	EA	\$ 4	1,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$	83,538
2.1k	Arrester Stand Foundations	3	EA	\$ 4	1,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$	27,846
2.1m	Wave Trap Stand Foundations	1	EA	\$ 4	1,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$	9,282
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
2.1p											
2.2	230kV										
2.2a	Circuit Breaker Foundations	0	EA	\$ 13	1,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$	-
2.2b	Capacitor Bank Foundations	0	EA	\$ 44	1,820	\$ -	\$ 48,000		\$ 92,820		-
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA		2,410	\$ -	\$ 24,000	\$ -	\$ 46,410		-
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22	,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$	-
	,						, , , , , , , , , , , , , , , , , , , ,				41 of 60

2.2f St 2.2g Bu 2.2h Bu 2.2j In 2.2k Ar 2.2m W	Switch Stand Foundations Station Service Transformer Stand Foundation Bus Support 3ph Foundations	0				Supply Rate	Cost		
2.2g Bu 2.2h Bu 2.2j In 2.2k Ar 2.2m W 2.2n M		0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2h Bu 2.2j In 2.2k Ar 2.2m W 2.2n M	Rus Sunnort 3nh Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2j In 2.2k Ar 2.2m W 2.2n M	**	0	EA	\$ -	\$ -	\$ -	\$ -	,	\$ -
2.2k Ar 2.2m W 2.2n M	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2m W 2.2n M	nstrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2n M	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	115kV						4		
	Circuit Breaker Foundations	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	
	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -		\$ -	\$ 69,615	·
	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 16,434	\$ -	\$ 17,600		\$ 34,034	
	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -		\$ -	\$ 34,034	•
	Switch Stand Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200		\$ 6,188	
	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -		\$ -
	Bus Support 3ph Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Bus Support 1 Ph Foundations	0	EA	\$ 2,988	\$ -	\$ 3,200	\$ -	\$ 6,188	\$ -
	nstrument Transformer Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -		\$ -
	Arrester Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Wave Trap Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
	Station Service Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.3p M	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Fransformer Foundations								
	345-230kV Transformer Foundation w/ Oil Containment	0	EA	\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	
2.4b 34	345-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 154,700	\$ -
2.4c 23	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4d 11	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.5 Cd	Control House Foundations / Pad								
2.5a C	Control House Addition Foundation (25-ft x 50-ft)	1	EA	\$ 51,368	\$ 51,368	\$ 53,700	\$ 53,700	\$ 105,068	\$ 105,068
2.5b G	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.6 Li	Lightning Mast Foundations								
	70' Lightning Mast Foundation	0	EA	\$ 5,229	\$ -	\$ 5,600	\$ -	\$ 10,829	\$ -
2.6b		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c		0	EA	\$ -	\$ -	•	\$ -	\$ -	\$ -
									-
TOTAL - SUBSTAT	ATION FOUNDATIONS				\$ 151,466		\$ 160,900		\$ 312,366
3. SUBSTATION S	STRUCTURES								
	345kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -		\$ -	\$ 74,000	
	Switch Stands	1	EA	\$ 14,800	\$ 14,800		\$ 14,800	\$ 29,600	
	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -		\$ -		\$ -
	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Bus Support 1 Ph	0	EA	\$ 3,700	\$ -		\$ -		\$ -
	nstrument Transformer Stand	9	EA	\$ 1,850	\$ 16,650	\$ 1,850	\$ 16,650	\$ 3,700	\$ 33,300
	Arrester Stand	3	EA	\$ 1,850	\$ 5,550	\$ 1,850	\$ 5,550		\$ 11,100
	Wave Trap Stand	1	EA	\$ 7,400	\$ 7,400	\$ 7,400	\$ 7,400	\$ 14,800	
	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475		\$ 12,950	
				.,		.,		,	
3.2 23	230kV								
	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300		\$ 33,300		\$ 66,600	
	Switch Stands	0	EA			\$ 12,025		\$ 24,050	
	Station Service Transformer Stand	0	EA	\$ 12,025				\$ 24,050	
	Bus Support 3ph	0	EA	\$ -			\$ -	\$ -	
J.45 ID	Bus Support 1 Ph	0	EA	\$ 2,775				\$ 5,550	
		0	EA	\$ 1,295		\$ 1,295		,-50	

13.0 Nove Tray Standard 10 1A 0 500 5 5 500 5 1 10 10	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2	3.2h	Arrester Stand	0	EA				\$ -	\$ 2,590	\$ -
Second Content			0	EA				\$ -		\$ -
2.8. photostace Author Statuture - Stand Goods	3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
2.8. photostace Author Statuture - Stand Goods										
3.00 Galasterion A Former Descriptor - Symmetric Control 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.	3.3	115kV								
3.15 South States 0 FA 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056 5 . 5 7,056	3.3a	Substation A-Frame Structures - Stand alone	0	EA			\$ 18,500	\$ -	\$ 37,000	\$ -
3 Fuer Stand 0 FA 5 7,055 5 5 5 5,000 5 5 1 1 1 1 1 1 1 1	3.3b	Substation A-Frame Structures - Shared Column	0	EA		\$ -	\$ 18,500	\$ -	\$ 37,000	\$ -
3.16 0.00 Support 19th 0.0 FA 5 3,303 5 .	3.3c	Switch Stands	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
3 Back inspect PP	3.3d	Fuse Stand	0	EA	\$ 7,955	\$ -	\$ 7,955	\$ -	\$ 15,910	\$ -
1	3.3e	Bus Support 3ph	0	EA	\$ 3,330	\$ -	\$ 3,330	\$ -	\$ 6,660	\$ -
2.5 American	3.3f	Bus Support 1 Ph	0	EA	\$ 1,850	\$ -	\$ 1,850	\$ -	\$ 3,700	\$ -
1.5 Move Prop States	3.3g	Instrument Transformer Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
2.38 Mes. Structures	3.3h	Arrester Stand	0	EA	\$ 740	\$ -	\$ 740	\$ -	\$ 1,480	\$ -
TOTAL-SUBSTATION STRUCTURES \$ 44,000	3.3j	Wave Trap Stand	0	EA		\$ -	\$ 3,700	\$ -	\$ 7,400	\$ -
A	3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
### A 1 345V 1										
### 1 SANA ### 1 SANA ### 1 SANA ### 1 SANA ### 1 SANA ### 1 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA ### 2 SANA						\$ 44,400		\$ 44,400		\$ 88,800
4.18	4. MAJOR EQU	IPTMENT								
4.16 Capactor Marks	4.1	345kV								
4.1 345 W - 201 W Auto Transformer	4.1a	Circuit Breakers	1	EA	\$ 200,000	\$ 200,000	\$ 80,000	\$ 80,000	\$ 280,000	\$ 280,000
## 14.2 398V 19.4 VarD Transformer 0 EA S S 75,000 S 75,000 S ## 4.2 Circuit Breakers 0 EA S 115,000 S S 80,000 S ## 4.2 Circuit Breakers 0 EA S 115,000 S S 80,000 S ## 4.3 STAN S S S S S S S S S	4.1b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
4.22 2384V	4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
A	4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.3 1154V	4.2	230kV								
A3 SISW	4.2a	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.30 Circul Breakers	4.2b		0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$ -
A-30 Circult Breaders										
A 30 Capactor Banics	4.3	115kV								
A 30 Capactor Banks	4.3a	Circuit Breakers	0	EA	\$ 52,000	\$ -	\$ 60,000	\$ -	\$ 112,000	\$ -
TOTAL - MADR RQUPTMENT / MATERIALS S 200,000 S 80,000 S 200,000 S 200,000 S 380,000 S 200,000 S 380,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 200,000 S 20	4.3b		0					\$ -		\$ -
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S.11 SafeW	TOTAL - MAJO	R EQUIPTMENT				\$ 200,000		\$ 80,000		\$ 280,000
S.1a Line Switches - 3ph w/ motor operator	5. SMALL EQU	PTMENT / MATERIALS								
S.1b Disconnect Switches - 3ph w/ manual operator 1 EA S 35,000 S 37,000 S 17,500 S 52,500 S 52,500 S 17,500 S 17,500 S 52,500 S 17,500 S 52,500 S 17,500 S 52,500 S 17,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 52,500 S 5	5.1	345kV								
S.1b Disconnect Switches - 3ph w/ manual operator 1 EA S 35,000 S 35,000 S 17,500 S 52,500 S 52,500 S 17,500 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 37,000 S 3	5.1a	Line Switches - 3ph w/ motor operator	1	EA	\$ 40,000	\$ 40,000	\$ 15,000	\$ 15,000	\$ 55,000	\$ 55,000
S.1d CTS S BA	5.1b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 35,000	\$ 35,000	\$ 17,500	\$ 17,500	\$ 52,500	\$ 52,500
Sile CCVTS Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile Sile	5.1c	VT'S	3	EA	\$ 25,000	\$ 75,000	\$ 12,000	\$ 36,000	\$ 37,000	\$ 111,000
S.1f Arresters 3	5.1d	CT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
Sign Wave Traps 1	5.1e	CCVT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
S.1h Station Service Transformers 0 EA S 200,000 S - S 50,000 S - S 250,000 S	5.1f	Arresters	3	EA	\$ 6,500	\$ 19,500	\$ 1,500	\$ 4,500	\$ 8,000	\$ 24,000
S.2 230kV S.2 Line Switches -3ph w/motor operator O EA S 55,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S 50,000 S S S S S S S S S	5.1g	Wave Traps	1	EA	\$ 13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Sign	5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
S.2a Line Switches - 3ph w/ motor operator S.2b Disconnect Switches - 3ph w/ manual operator S.2b Disconnect Switches - 3ph w/ manual operator S.2b S.2c VT'S S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c	5.1j									
S.2a Line Switches - 3ph w/ motor operator S.2b Disconnect Switches - 3ph w/ manual operator S.2b Disconnect Switches - 3ph w/ manual operator S.2b S.2c VT'S S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c S.2c										
S.2b Disconnect Switches - 3ph w/ manual operator 0 EA \$ 30,000 \$ - \$ 17,500 \$ - \$ 47,500 \$ 5.2c VTS 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.2d CTS 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.2d CTS 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.2d CTS 0 EA \$ 10,000 \$ - \$ 6,000 \$ - \$ 16,000 \$ 5.2d CTS CCVTS 0 EA \$ 10,000 \$ - \$ 6,000 \$ - \$ 11,000 \$ 5.2d CTS CCVTS 0 EA \$ 13,000 \$ - \$ 5,000 \$ - \$ 11,000 \$ 5.2d CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS CTS	5.2	230kV								
S.2c	5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
S.2d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ \$ \$ 5.2e CCVT'S 0 EA \$ 10,000 \$ - \$ 5,000 \$ - \$ 16,000 \$ \$ \$ 5.2e \$ \$ \$ \$ \$ \$ \$ \$ \$	5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
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5.2f Arresters 0 EA \$ 5,000 \$ \$ - \$ 6,000 \$ \$ - \$ 11,000 \$ 5.2g Wave Traps 0 EA \$ 13,000 \$ \$ - \$ 8,000 \$ \$ - \$ 21,000 \$ 5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$	5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2f Arresters 0 EA \$ 5,000 \$ \$ - \$ 6,000 \$ \$ - \$ 11,000 \$ 5.2g Wave Traps 0 EA \$ 13,000 \$ \$ - \$ 8,000 \$ \$ - \$ 21,000 \$ 5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$	5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ <t< td=""><td>5.2f</td><td>Arresters</td><td>0</td><td>EA</td><td>\$ 5,000</td><td>\$ -</td><td>\$ 6,000</td><td>\$ -</td><td>\$ 11,000</td><td>\$ -</td></t<>	5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2h Station Service Transformers 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ 48,000 \$ - \$ <t< td=""><td>5.2g</td><td>Wave Traps</td><td>0</td><td>EA</td><td>\$ 13,000</td><td>\$ -</td><td>\$ 8,000</td><td>\$ -</td><td>\$ 21,000</td><td>\$ -</td></t<>	5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
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5.3d CT'S 0 EA \$ 13,000 \$ - \$ 8,000 \$ - \$ 21,000 \$ 5.3e CCVT'S 0 EA \$ 8,000 \$ - \$ 8,000 \$ - \$ 16,000 \$ 5.3f Arresters 0 EA \$ 3,420 \$ - \$ 6,000 \$ - \$ 9,420 \$ 5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	5.3b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 28,000	\$ -	\$ 17,500	\$ -	\$ 45,500	\$ -
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5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$	5.3e	CCVT'S	0	EA	\$ 8,000	\$ -	\$ 8,000	\$ -	\$ 16,000	\$ -
5.3g Wave Traps 0 EA \$ - \$ - \$ - \$ - \$	5.3f	Arresters	0	EA	\$ 3,420	\$ -	\$ 6,000	\$ -	\$ 9,420	\$ -
5.3h Station Service Transformers 0 EA S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S - S -	5.3g	Wave Traps	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<u>, , , , , , , , , , , , , , , , , , , </u>	5.3h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5.3j	Fuses	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	L EQUIPTMENT / MATERIALS				\$ 260,500		\$ 129,000		\$ 389,500
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE Addition (25-ft x 50-ft)	1	EA	\$ 325,000	\$ 325,000	\$ 85,000	\$ 85,000	\$ 410,000	\$ 410,000
6.2	Protection and Telecom Equipment Panels	3	EA	·	\$ 105,000	·		\$ 47,500	
6.3	125VDC Batteries	0	EA	\$ 75,000	\$ -		\$ -	\$ 100,000	
6.4	Control Cables	1	LS	\$ 130,900	\$ 130,900		\$ 130,900	\$ 261,800	
6.5	SCADA and Communications	0	EA	\$ -	\$ -		\$ -	\$ -	\$ -
6.6	Low Voltage AC Distribution	0	EA EA	\$ 50,000 \$ 50,000	\$ -		\$ -	\$ 150,000	
	DC Distribution System	0	EA EA		\$ - \$ -		\$ - \$ -	\$ 150,000 \$ 15,000	
6.8	Security Fire Alarm	0	EA EA	\$ 7,500 \$ 7,500	\$ - \$ -		\$ - \$ -	\$ 15,000	
6.10	Generator	0	EA	\$ 7,500	\$ -	\$ 7,500		\$ 180,000	
6.10	Generator	U	EA	\$ 100,000	ş -	\$ 80,000	ş -	\$ 180,000	\$ -
TOTAL - CONT	 ROL HOUSE / PANELS / GENERATOR				\$ 560,900		\$ 253,400		\$ 814,300
7. MISC ITEMS					\$ 300,500		\$ 233,400		3 814,300
7.1	Conduit & Cable Trench System	800	LF	\$ 185.00	\$ 148,000	\$ 170.00	\$ 136,000	\$ 355	\$ 284,000
7.2	Rigid Bus, Fittings & Insulators	0	LS	\$ 15,008.40	\$ -	\$ 56,904.00		\$ 71,912	
7.3	Strain Bus, Connectors & Insulators	2,500	LF	\$ 13.38	\$ 33,450		\$ 98,375	\$ 53	
7.4	Grounding System	0	LF	\$ 6.93	\$ -	\$ 32.58	\$ -	\$ 40	\$ -
7.5	Charles Book Landaharan 245144	38	EA	\$ 2,000	\$ 76,000	\$ 1,050	\$ 39,900	\$ 3,050	\$ 115,900
7.6	Strain Bus Insulators - 345kV Strain Bus Insulators - 230kV	0	EA EA	\$ 2,000				\$ 3,030	
7.7	Strain Bus Insulators - 250kV	0	EA	\$ 1,400	\$ - \$ -		\$ - \$ -	\$ 2,150	
7.7	Low Voltage AC Station Service	0	LS	\$ 50,000	\$ -	\$ 75,000		\$ 125,000	
7.9	SSVT Service	0	LS	\$ 45,000	\$ -			\$ 90,000	
7.10	Control Conduits from Trench to Equipment	1	LS	\$ 62,500	\$ 62,500	1 -7	\$ 75,000	\$ 137,500	
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$ 90,000	\$ 90,000			\$ 198,000	
7.12	imisc. Materials (Above and below Ground)			30,000	30,000	7 100,000	7 100,000	7 150,000	7 130,000
7.13									
7.14									
7.15									
7.16									
7.17									
7.18									
7.19									
7.20									
7.21									
7.22									
7.23									
7.24									
7.25									
TOTAL - MISC	ITEMS				\$ 409,950		\$ 457,275		\$ 867,225
	nt Valley Substation - Install				\$ 1,638,241		\$ 1,139,600		\$ 2,777,841
8. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1	Mob / Demob	1.0	LS	\$ -	\$ -	\$ 27,778	\$ 27,778	\$ 27,778	\$ 27,778
	Project Management, Material Handling & Amenities								
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 161,675	\$ 161,675	\$ 161,675	\$ 161,675
8.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 27,778	\$ 27,778	\$ 27,778	\$ 27,778
8.4	Site Accommodation, Facilities, Storage	1		\$ -	\$ -	\$ 27,778			
-	Engineering	_	-			,,,,,	,,,,,,	. ,	, ,,,,,
8.5	Design Engineering	1	LS	\$ -	\$ -	\$ 222,227	\$ 222,227	\$ 222,227	\$ 222,227
8.6	LIDAR	-	LS	\$ -	\$ -		\$ -	\$ -	\$ -
8.7	Geotech	4	EA	\$ -	\$ -	\$ 3,500	\$ 14,000	\$ 3,500	
8.8	Surveying/Staking	1	Site	\$ -	\$ -	\$ 19,445	\$ 19,445	\$ 19,445	\$ 19,445
	Testing & Commissioning								
	· · · · · · · · · · · · · · · · · · ·								D 44 -£(0

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 69,446	\$ 69,446	\$ 69,446	\$ 69,446
	Permitting and Additional Costs								
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 8,334	\$ 8,334	\$ 8,334	\$ 8,334
8.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 131,059	\$ 131,059	\$ -	\$ -	\$ 131,059	\$ 131,059
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 2,778	\$ 2,778	\$ 2,778	\$ 2,778
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 131,059		\$ 581,239		\$ 712,299

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J. SS Pleasant Valley-Install

NAT - NYPA - T030 - (Segment B Enhanced) N. Interconnection Milan Station

Estimate Revision:	5		Total:	\$ 742,607	
	NAT - NYPA - T030 - (Segm	ent B Enhai	nced)		
			Supply	Installation	Total
	N. Interconnection Milan Station				
	1. CLEARING & ACCESS	\$	-	\$ 121,100	\$ 121,100
	2. FOUNDATIONS	\$	84,375	\$ 135,279	\$ 219,654
	3. STRUCTURES	\$	130,328	\$ 88,667	\$ 218,994
	4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
	5. INSULATORS, FITTINGS, HARDWARE	\$	45,200	\$ 18,480	\$ 63,680
	6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	20,792	\$ 98,387	\$ 119,179
	CONTRACTOR MARK-UP (OH&P)	\$	•	\$ -	\$ -
	SUBTOTAL:	\$	280,695	\$ 461,912	\$ 742,607
1	CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
	TOTAL:	\$	280,695	\$ 461,912	\$ 742,607

Description	of Work:										
Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	pply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	тс	OTAL
N. Interd	connection Milan Station										
1. CLEARING 8	ACCESS										
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$	-
1.2	Clearing the ROW - Light (mowing)	1.0	Acre	\$	-	\$ -	\$ 5,000		\$ 5,000	\$	5,000
1.3	Access Road	-	LF	\$		\$ -	\$ 45		\$ 45		-
1.4	Silt Fence	500.0	LF	\$		\$ -	\$ 4		\$ 4		2,000
1.5	Matting - Access and ROW	500.0	LF	\$		\$ -	\$ 70				35,000
1.6	Matting - To Work Area	525.0	LF	\$		\$ -	\$ 70				36,750
1.7	Snow Removal	-	LS	\$		\$ -	\$ 516,800		\$ 516,800		-
1.8	ROW Restoration	0.5	Mile	\$		\$ -	\$ 10,000		\$ 10,000		5,000
1.9	Work Pads	10,000.0	SF	\$		\$ -	\$ 4			\$	35,200
1.10	Restoration for Work Pad areas	2,000.0	SF	\$		\$ -	\$ 0.2			\$	300
1.11	Temporary Access Bridge	-	EA	\$		\$ -	\$ 20,035		\$ 20,035		-
1.12	Air Bridge	-	EA	\$		\$ -	\$ 14,445		\$ 14,445		-
1.13	Stabilized Construction Entrance	-	EA	\$		\$ -	,		\$ 4,580		-
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$		\$ -	\$ 4,130		\$ 4,130		-
1.15	Gates	-	EA	\$	2,000		\$ 2,500		\$ 4,500		-
1.16	Culverts / Misc. Access	-	EA	\$	750		\$ 1,250		\$ 2,000		-
1.17	Concrete Washout Station	1	EA	\$		\$ -	\$ 1,850		\$ 1,850		1,850
1.18						\$ -		\$ -		\$	-
1.19	Countries d Deads	0	CV			\$ -	\$ 75	\$ -	ć 103	\$	-
1.20	Crushed Rock RING & ACCESS	U	CY	\$	27		\$ 75		\$ 102	\$	121 100
2. FOUNDATION						\$ -		\$ 121,100		\$	121,100
Z. FOUNDATIO	JNS 										
2.1	Drilled Pier - 115kV Single Circuit Single Pole Angle/DE	2	EA	\$	42,187	\$ 84,375	\$ 42,639	\$ 85,279	\$ 84,827	\$	169,654
2.2											
2.3											
2.4											
2.5	Rock Excavation Adder	25	СУ	\$	-	\$ -	\$ 2,000	\$ 50,000	\$ 2,000	\$	50,000
2.6						\$ -		\$ -		\$	-
2.7						\$ -		\$ -		\$	-
2.8						\$ -		\$ -		\$	-
2.9						\$ -		\$ -		\$	-
2.10						\$ -		\$ -		\$	-
2.11						\$ -		\$ -		\$	-
2.12						\$ -		\$ -		\$	-
2.13						\$ -		\$ -		\$	-
2.14						\$ -		\$ -		\$	-
2.15						\$ -		\$ -		\$	-
TOTAL - FOUN	DATIONS					\$ 84,375		\$ 135,279		\$	219,654

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3. STRUCTURES									
	115kV Single Circuit Single Pole Angle/DE	2	Structure	\$ 64,658	\$ 129,316	\$ 38,795	\$ 77,590	\$ 103,453	\$ 206,905
3.2									
3.3					\$ -		\$ -		\$ -
3.4 3.5	Install Grounding and Grounding Accessories	2	Pole	\$ 506	7	\$ 5,539	\$ -		\$ 12,089
3.6	install drounding and drounding recessories		1 010	300	\$ -	ý 3,555	\$ -	φ 0,013	\$ -
3.7					\$ -		\$ -		\$ -
3.8					\$ -		\$ -		\$ -
3.9 3.10					\$ - \$ -		\$ - \$ -		\$ - \$ -
3.11					\$ -		\$ -		\$ - \$ -
3.12					\$ -		\$ -		\$ -
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15 TOTAL - STRUC	TUDEC				\$ - \$ 130.328		\$ - \$ 88.667		\$ -
	r, SHIELDWIRE, OPGW				\$ 130,328		\$ 88,667		\$ 218,994
	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ 1.35		\$ 5.00	'		\$ -
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ 0.47		\$ 5.00	\$ -	\$ 5.47	\$ -
	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$ -	\$ -	\$ 30,000	\$ -		\$ -
4.6	Remove Existing OPGW Cable	-	Mile	\$ -	\$ -	\$ 12,000	\$ -	,	\$ -
4.7	Remove Existing EH7 115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	Mile LF	\$ - \$ 1.90	\$ -	\$ 12,000 \$ 5.00	\$ -	,	\$ - \$ -
4.8	113KV - (1) 934KCIIII 34/7 AC33 Caluillai	-	LF	3 1.90	,	3.00	, -	ÿ 0.30	-
	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
	Rider Poles	-	EA	\$ 1,750	\$ -	\$ 3,500	\$ -	\$ 5,250.00	\$ -
	CTOR, SHIELDWIRE, OPGW:				\$ -		\$ -		\$ -
	FITTINGS, HARDWARE		A no name la la c	ć 1,000	ć	ć 720	ć	ć 2.520	
	345kV Tangent (1-Group of 18-Bells Each Assembly) 115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly Assembly	\$ 1,800 \$ 900	\$ - \$ -	\$ 720 \$ 560	\$ -		\$ - \$ -
	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	24	Assembly	\$ 1,800	\$ 43,200	\$ 720	7		\$ 60,480
	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 900	\$ -	\$ 560	\$ -		\$ -
5.5		-	Assembly		\$ -		\$ -		\$ -
	OPGW Assembly - Tangent	-	Assembly	\$ 200		\$ 150	\$ -		\$ -
	OPGW Assembly - Angle / DE OHSW Assembly - Tangent	- 4	Assembly Assembly	\$ 250 \$ 200	\$ 1,000 \$ -	\$ 150 \$ 150	\$ 600 \$ -		\$ 1,600 \$ -
	OHSW Assembly - Tangent OHSW Assembly - Angle / DE	4	Assembly	\$ 250	\$ 1,000	\$ 150	\$ 600		\$ 1,600
	OPGW Splice Boxes		Set	\$ 1,746		\$ 2,274			\$ -
	OPGW Splice & Test	-	EA	\$ 2,520		\$ 2,520			\$ -
	Spacer - Conductor	-	EA	\$ 50		\$ 35			\$ -
	Vibration Dampers - Conductor	-	EA	\$ 35		\$ 35 \$ 35			\$ -
	Shieldwire / OPGW Dampers, Misc. Fittings Guys, Anchors, and Accessories	-	EA EA	\$ 27 \$ 720		\$ 35 \$ 885	\$ - \$ -		\$ - \$ -
	Misc. materials (Signs and Markers)	-	Mile	\$ 770	\$ -	\$ 1,006	\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -
5.17	· · · · · · · · · · · · · · · · · · ·								
5.18									
5.19 5.20									
	NTOR, FITTINGS, HARDWARE				\$ 45,200		\$ 18,480		\$ 63,680
	onnection Milan Station				\$ 259,903		\$ 363,525		\$ 623,428
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
,	Contractor Mobilization / Demobilization								
	Mob / Demob	1	LS	\$ -	\$ -	\$ 6,234	\$ 6,234	\$ 6,234	\$ 6,234
	Project Management, Material Handling & Amenities								
1 62 1	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 36,284	\$ 36,284	\$ 36,284	\$ 36,284
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 6,234	\$ 6,234	\$ 6,234	\$ 6,234
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 6,234			
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 31,171	\$ 31,171	\$ 31,171	\$ 31,171

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.6	Lidar	1	LS	\$ -	\$ -	\$ 1,870	\$ 1,870	\$ 1,870	\$ 1,870
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 4,364	\$ 4,364	\$ 4,364	\$ 4,364
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 1,870	\$ 1,870	\$ 1,870	\$ 1,870
6.13	Real Estate Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$ 20,792	\$ 20,792	\$ -	\$ -	\$ 20,792	\$ 20,792
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 623	\$ 623	\$ 623	\$ 623
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 20,792		\$ 98,387		\$ 119,179

Page 48 of 60 K. In. Milan SS

NAT - NYPA - T030 - (Segment B Enhanced) L. Interconnection Knickerbocker Station

Estimate Revision: 5 Total: \$ 1,487,366

NAT - NYPA - T030 - (S	Segment B Enha	inced)				
		Supply	Installation	\$ 482,850 \$ 285,311 \$ 446,855 \$ - \$ 47,220		
L. Interconnection Knickerbocker Station						
1. CLEARING & ACCESS	\$	-	\$	482,850	\$	482,850
2. FOUNDATIONS	\$	89,638	\$	195,674	\$	285,311
3. STRUCTURES	\$	249,838	\$	197,017	\$	446,855
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$	-
5. INSULATORS, FITTINGS, HARDWARE	\$	29,466	\$	17,754	\$	47,220
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	29,515	\$	195,614	\$	225,130
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	398,458	\$	1,088,909	\$	1,487,366
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL:	Ś	398.458	Ś	1.088.909	Ś	1.487.366

Description	of Work:															
Item	ltem Description	Estimated Quantity	Unit of Measure	Mate	erial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL						
L. Interc	onnection Knickerbocker Station															
1. CLEARING 8	ACCESS															
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -						
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000		· ·							
1.3	Access Road	-	LF	\$		\$ -	\$ 45		\$ 45							
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -		\$ 14,000	\$ 4	\$ 14,000						
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000						
1.6	Matting - To Work Area	675.0	LF	\$	-	\$ -	\$ 70	\$ 47,250	\$ 70	\$ 47,250						
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800		\$ 516,800	\$ -						
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000						
1.9	Work Pads	45,000.0	SF	\$	-	\$ -	\$ 4	\$ 158,400	\$ 4	\$ 158,400						
1.10	Restoration for Work Pad areas	9,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 1,350	\$ 0	\$ 1,350						
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -						
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -						
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -						
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -						
1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -						
1.16	Culverts / Misc. Access	-	EA	\$	750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -						
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850						
1.18						\$ -		\$ -		\$ -						
1.19						\$ -		\$ -		\$ -						
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$ -						
TOTAL - CLEAR	RING & ACCESS					\$ -		\$ 482,850		\$ 482,850						
2. FOUNDATIO	DNS															
2.1	1-CKT 115KV 3-POLE TANGENT DEADEND (0°-5°)	6	EA	\$	3,025	\$ 18,150	\$ 20,570	\$ 123,420	\$ 23,595	\$ 141,570						
2.2	1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	3	EA	\$	23,829	\$ 71,488	\$ 24,085	\$ 72,254	\$ 47,914	\$ 143,741						
2.3																
2.4																
2.5	Rock Excavation Adder	-	СУ	\$	-	\$ -	\$ 2,000	\$ -	\$ 2,000	\$ -						
2.6						\$ -		\$ -		\$ -						
2.7				+		\$ -		\$ -		\$ -						
2.8				1		\$ -		\$ -		\$ -						
2.0	1	1		1		-	1	1 4	l .	<u> </u>						

Itom	Itom Description	Estimated Quantity	Unit of Measure	Matarial Cumby Pate	Material Supply Cost	Labor & Equipment	Labor & Equipment	Total Unit Rate	TOTAL
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Onit Rate	IOIAL
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ -		\$ -
2.11					\$ -		\$ -		\$ -
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		\$ -
2.14					\$ -		\$ -		\$ -
2.15 TOTAL - FOUN	DATIONS				\$ -		\$ - \$ 195,674		\$ - \$ 285,311
3. STRUCTURE					\$ 65,036		3 193,074		\$ 203,311
3.1	1-CKT 115KV 3-POLE TANGENT DEADEND (0°-5°)	2	Structure	\$ 76,17	\$ 152,355	\$ 45,706	\$ 91,413	\$ 121,884	\$ 243,768
3.2	1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	1	Structure	\$ 92,929			\$ 55,758		
3.3									
3.4					\$ -		\$ -		\$ -
3.5	Install Grounding and Grounding Accessories	9	Pole	\$ 500	\$ 4,554	\$ 5,539	\$ 49,847	\$ 6,045	\$ 54,401
3.6					\$ -		\$ -		\$ -
3.7					\$ -		\$ -		\$ -
3.8					\$ - \$ -		\$ - \$ -		\$ - \$ -
3.10					\$ -		\$ -		\$ -
3.10					\$ -		\$ -		\$ -
3.12					\$ -		\$ -		\$ -
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
	CTUDE:				, and and		<u> </u>		•
TOTAL - STRUC					\$ 249,838		\$ 197,017		\$ 446,855
	R, SHIELDWIRE, OPGW						•		
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.9		7	\$ -	\$ 6.90	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF		5 \$ -		\$ -	\$ 6.35	\$ -
4.3	(1) 3/8" EHS7 Steel	-	LF Mile	\$ 0.4	' \$ - \$ -	\$ 5.00 \$ 30,000	\$ - \$ -	\$ 5.47 \$ 30,000.00	\$ - \$ -
4.5	Remove Existing 115kV Cable From Existing Structures Remove Existing OPGW Cable	-	Mile	\$ -	+:		\$ -	\$ 12,000.00	\$ -
4.7	Remove Existing 61 GW Cable Remove Existing EH7	-	Mile		\$ -	, , , , , , , , , , , , , , , , , , , ,	\$ -	\$ 12,000.00	
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF) \$ -		\$ -	\$ 6.90	
4.9	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-							
4.10	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles	-	EA	\$ 1,75) \$ -	\$ 3,500	\$ -	\$ 5,250.00	\$ -
	UCTOR, SHIELDWIRE, OPGW:				\$ -		\$ -		\$ -
	, FITTINGS, HARDWARE								
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800		,	\$ -	\$ 2,520	\$ -
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	12	Assembly	\$ 900		7	\$ 6,720		\$ 17,520
5.3 5.4	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	7	Assembly	\$ 1,800	\$ 12,600	\$ 720	\$ 5,040 \$ -	\$ 2,520	\$ 17,640 \$ -
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)		Assembly Assembly	\$ 900) \$ -	\$ 360	\$ -	\$ 1,260	
5.6	OPGW Assembly - Tangent	2	Assembly		\$ 400		<u>'</u>		
5.7	OPGW Assembly - Angle / DE	2	Assembly		\$ 500		\$ 300		\$ 800
5.8	OHSW Assembly - Tangent	2	Assembly		\$ 400		\$ 300		\$ 700
5.9	OHSW Assembly - Angle / DE	2	Assembly		\$ 500	\$ 150	\$ 300		\$ 800
5.10	OPGW Splice Boxes	1	Set	\$ 1,746		\$ 2,274			\$ 4,020
5.11	OPGW Splice & Test	1	EA	\$ 2,520					
5.12	Spacer - Conductor	-	EA) \$ -		\$ -	\$ 85	\$ -
5.13	Vibration Dampers - Conductor	-	EA	\$ 3!	1		\$ -	\$ 70	\$ -
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA		' \$ -		\$ -	\$ 62	
	Guys, Anchors, and Accessories	-	EA			\$ 885		\$ 1,605	
5.16 5.17	Misc. materials (Signs and Markers)	-	Mile	\$ 770) \$ -	\$ 1,006	\$ -	\$ 1,776	\$ -
5.18									
5.19									
5.20									
TOTAL - INSUL	ATOR, FITTINGS, HARDWARE				\$ 29,466		\$ 17,754		\$ 47,220
L. Interc	onnection Knickerbocker Station				\$ 368,942		\$ 893,294		\$ 1,262,237
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
	•				•			•	Page 50 of 60

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 12,622	\$ 12,622	\$ 12,622	\$ 12,622
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 73,464	\$ 73,464	\$ 73,464	\$ 73,464
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 12,622	\$ 12,622	\$ 12,622	\$ 12,622
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 12,622	\$ 12,622	\$ 12,622	\$ 12,622
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 63,112	\$ 63,112	\$ 63,112	\$ 63,112
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 3,787	\$ 3,787	\$ 3,787	\$ 3,787
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 8,836	\$ 8,836	\$ 8,836	\$ 8,836
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 3,787	\$ 3,787	\$ 3,787	\$ 3,787
6.13	Real Estate Costs (New)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 29,51	\$ 29,515		\$ -	\$ 29,515	
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 1,262	· · · · · · · · · · · · · · · · · · ·	\$ 1,262	
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 29,515		\$ 195,614		\$ 225,130

M. Interconnection Churchtown Station

		NAT ANNA TOO (Comment D Sub-mand)		
Revision	5		Total:	\$ 2,540,063

NAT - NYPA - T030 - (Segment I	Enhan	ced)		
		Supply	Installation	Total
M. Interconnection Churchtown Station				
1. CLEARING & ACCESS	\$	-	\$ 525,600	\$ 525,600
2. FOUNDATIONS	\$	231,719	\$ 334,201	\$ 565,920
3. STRUCTURES	\$	563,647	\$ 401,007	\$ 964,654
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$ -
5. INSULATORS, FITTINGS, HARDWARE	\$	58,666	\$ 27,354	\$ 86,020
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	68,323	\$ 329,545	\$ 397,868
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$ -
SUBTOTAL:	\$	922,355	\$ 1,617,707	\$ 2,540,063
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$ -
TOTAL:	\$	922,355	\$ 1,617,707	\$ 2,540,063

Descri	iption of	Wor	k:
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Item	ltem Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	connection Churchtown Station									
1. CLEARING &	ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$		\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	525.0	LF	\$	-	\$ -	\$ 70	\$ 36,750	\$ 70	\$ 36,750
1.7	Snow Removal	-	LS	\$		\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$		\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	60,000.0	SF	\$	-	\$ -	\$ 4	\$ 211,200	\$ 4	\$ 211,200
1.10	Restoration for Work Pad areas	12,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 1,800	\$ 0	\$ 1,800
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$	2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$	750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18						\$ -		\$ -		\$ -
1.19						\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEAR	RING & ACCESS					\$ -		\$ 525,600		\$ 525,600
2. FOUNDATIO	DNS									
2.1	1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	6	EA	\$	18,077	\$ 108,464	\$ 18,271	\$ 109,626	\$ 36,348	\$ 218,090
2.2	2x 1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	6	EA	\$	20,543	\$ 123,255	\$ 20,763	\$ 124,575	\$ 41,305	\$ 247,830
2.3										
2.4										
2.5	Rock Excavation Adder	50	CY	\$	-	\$ -	\$ 2,000	\$ 100,000	\$ 2,000	\$ 100,000
2.6						\$ -		\$ -		\$ -
2.7						\$ -		\$ -		\$ -
2.8						\$ -		\$ -		\$ -
2.9						\$ -		\$ -		\$ -
2.10 2.11						\$ - \$ -		\$ - \$ -		\$ - \$ -
2.11						\$ -		\$ - \$ -		\$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	I Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
2.13						\$ -		\$ -		\$	-
2.14						\$ -		\$ -		\$	-
2.15						\$ -		\$ -		\$	-
TOTAL - FOUN						\$ 231,719		\$ 334,201		\$	565,920
3. STRUCTURE											
3.1	1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	2	Structure	\$		\$ 185,858	\$ 55,758	\$ 111,515	\$ 148,687	\$	297,373
3.2	2x 1-CKT 115KV 3-POLE LARGE ANGLE DEADEND (60°-90°)	2	Structure	\$	185,858	\$ 371,717	\$ 111,515	\$ 223,030	\$ 297,373	\$	594,747
3.3											
3.4		- 12		\$	505	\$ - \$ 6.072	4 5.500	\$ -	\$ 6.045	\$	
3.5 3.6	Install Grounding and Grounding Accessories	12	Pole	\$	506	\$ 6,072 \$ -	\$ 5,539	\$ 66,462 \$ -	\$ 6,045	\$	72,534
3.7						\$ -		\$ -		Ś	
3.8						\$ -		\$ -		\$	-
3.9						\$ -		\$ -		\$	-
3.10						\$ -		\$ -		\$	_
3.11						\$ -		\$ -		\$	_
3.12						\$ -		\$ -		Ś	-
3.13						\$ -		\$ -		\$	-
3.14						\$ -		\$ -		\$	-
3.15						\$ -		Ś -		\$	_
						-					
TOTAL - STRUC						\$ 563,647		\$ 401,007		\$	964,654
	R, SHIELDWIRE, OPGW										
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$	1.90		\$ 5.00		\$ 6.90		-
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$	1.35		\$ 5.00	\$ -	\$ 6.35		-
4.3	(1) 3/8" EHS7 Steel	-	LF	\$	0.47		\$ 5.00	\$ -	\$ 5.47		-
4.5	Remove Existing 115kV Cable From Existing Structures	-	Mile	\$		\$ -	\$ 30,000	\$ -	\$ 30,000.00	\$	-
4.6	Remove Existing OPGW Cable Remove Existing EH7	-	Mile Mile	\$		\$ - \$ -	\$ 12,000 \$ 12,000	\$ - \$ -	\$ 12,000.00 \$ 12,000.00		-
4.7	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$	1.90	\$ -	\$ 12,000 \$ 5.00	\$ - \$ -	\$ 12,000.00 \$ 6.90		-
4.8	113KV - (1) 934KCIIII 34/ / AC33 Caldillai	-	LF	,	1.50	· -	3.00	· -	Ş 0.50	J.	
4.10	Rider Poles - Relocated	-	Set	\$	-	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$	-
4.11	Rider Poles	-	EA	Ś	1,750		\$ 3,500	'	\$ 5,250.00		-
	JCTOR, SHIELDWIRE, OPGW:			Ť	2,7.50	\$ -	3,300	\$ -	+	Ś	-
5. INSULATOR	FITTINGS, HARDWARE										
5.1	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$	1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$	-
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900	\$ -	\$ 560	\$ -	\$ 1,460	\$	-
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	28	Assembly	\$	1,800	\$ 50,400	\$ 720	\$ 20,160	\$ 2,520	\$	70,560
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	-	Assembly	\$	900	\$ -	\$ 560	\$ -	\$ 1,460	\$	-
5.5			Assembly			\$ -	\$ 360		\$ 360		-
5.6	OPGW Assembly - Tangent	-	Assembly	\$	200		\$ 150	•	\$ 350		
5.7	OPGW Assembly - Angle / DE	8	Assembly	\$	250		\$ 150		\$ 400		3,200
5.8	OHSW Assembly - Tangent	-	Assembly	\$	200		\$ 150	•	\$ 350		-
5.9	OHSW Assembly - Angle / DE	8	Assembly	\$		\$ 2,000	\$ 150	\$ 1,200	\$ 400	\$	3,200
5.10	OPGW Splice Boxes	1	Set	\$	-/	\$ 1,746	\$ 2,274		\$ 4,020	\$	4,020
5.11	OPGW Splice & Test	- 1	EA EA	<u> </u>	2,520 50	\$ 2,520 \$ -	\$ 2,520 \$ 35		\$ 5,040 \$ 85	Y	5,040
5.12	Spacer - Conductor		EA	\$							
5.13	Vibration Dampers - Conductor	-	EA	\$	35	\$ -	\$ 35	\$ -	\$ 70	\$	-
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27	\$ -	\$ 35	\$ -	\$ 62	\$	-
5.15	Guys, Anchors, and Accessories	-	EA	\$	720	\$ -	\$ 885	\$ -	\$ 1,605	Ś	-
5.16	Misc. materials (Signs and Markers)	-	Mile	\$	770		\$ 1,006	Y	\$ 1,776	Y	-
5.17	, ,		-	1			,,,,,,		,		-
5.18											
5.19											
5.20											
TOTAL - INSUL	ATOR, FITTINGS, HARDWARE					\$ 58,666		\$ 27,354		\$	86,020
M. Inter	connection Churchtown Station					\$ 854,033		\$ 1,288,162		\$	2,142,195
	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					, , ,		, , ,			
J. IVIOB/DEIVIC	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	Ś	-	\$ -	\$ 21,422	\$ 21,422	\$ 21,422	Ś	21,422
5.2	Project Management, Material Handling & Amenities	<u> </u>		†		•	. 22,722	. 22,722	. 22,722	-	
		1									

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Su	ıpply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 124,679	\$ 124,679	\$ 124,679	\$ 124,679
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 21,422	\$ 21,422	\$ 21,422	\$ 21,422
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 21,422	\$ 21,422	\$ 21,422	\$ 21,422
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 107,110	\$ 107,110	\$ 107,110	\$ 107,110
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 6,427	\$ 6,427	\$ 6,427	\$ 6,427
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 14,995	\$ 14,995	\$ 14,995	\$ 14,995
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 6,427	\$ 6,427	\$ 6,427	\$ 6,427
6.13	Real Estate Costs (New)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 68,323	\$	68,323		\$ -	\$ 68,323	\$ 68,323
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 2,142	\$ 2,142	\$ 2,142	
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	68,323		\$ 329,545		\$ 397,868

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N. Interconnection Pleasant Valley

Estimate Revision: 5 Total: \$ 2,679,858

\$ \$ \$	Supply - 61,875 388,477	\$	578,850 790,750	<u> </u>	Total 578,850 852,625
\$ \$ \$	- ,	\$,	<u> </u>	
\$ \$ \$	- ,	\$ \$,	<u> </u>	
\$ \$	- ,	\$	790,750	\$	852.62
\$	388,477	Ġ			00-,0-0
S		٠,	311,610	\$	700,087
Υ	-	\$	-	\$	-
\$	105,566	\$	47,094	\$	152,660
\$	44,473	\$	351,162	\$	395,636
\$	-	\$	-	\$	-
\$	600,392	\$	2,079,466	\$	2,679,858
\$	-	\$	-	\$	-
\$	600,392	\$	2,079,466	\$	2,679,858
	\$ \$ \$	\$ 44,473 \$ - \$ 600,392 \$ -	\$ 44,473 \$ \$ - \$ \$ \$ 600,392 \$ \$ - \$	\$ 44,473 \$ 351,162 \$ - \$ - \$ 600,392 \$ 2,079,466 \$ - \$ -	\$ 44,473 \$ 351,162 \$ \$ \$ - \$ - \$ \$ \$ \$ \$ 600,392 \$ 2,079,466 \$ \$ \$ \$ - \$ \$

Description	1 Of WORK:	1				<u> </u>			
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
N. Interconnection Pleasant Valley									
1. CLEARING	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$ -	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	525.0	LF	\$ -	\$ -	\$ 70	\$ 36,750	\$ 70	\$ 36,750
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	75,000.0	SF	\$ -	\$ -	\$ 4	\$ 264,000	\$ 4	\$ 264,000
1.10	Restoration for Work Pad areas	15,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 2,250	\$ 0	\$ 2,250
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850			\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEA	ARING & ACCESS				\$ -		\$ 578,850		\$ 578,850
2. FOUNDAT	ions								
2.1	1-CKT 115KV 3-POLE TANGENT DEADEND (0°-5°)	15	EA	\$ 4,125	\$ 61,875	\$ 28,050	\$ 420,750	\$ 32,175	\$ 482,625
2.2									
2.3									
2.4									
2.5	Rock Excavation Adder	185	СҮ	\$ -	\$ -	\$ 2,000	\$ 370,000	\$ 2,000	\$ 370,000
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ -		\$ -		\$ -
2.10					\$ -		\$ - \$ -		\$ - \$ -
2.11		1	I	1	15 -	1	\$	1	\$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.12					\$ -		\$ -		\$ -
2.13					\$ -		\$ -		\$ -
2.14					\$ -		\$ -		\$ -
2.15					\$ -		\$ -		\$ -
TOTAL - FOUN					\$ 61,875		\$ 790,750		\$ 852,625
3. STRUCTUR	115kV Single Circuit Single Pole Angle/DE	5	Structure	\$ 76,177	\$ 380,887	\$ 45,706	\$ 228,532	\$ 121,884	\$ 609,420
3.2	113KV Shigle Circuit Shigle Fole Angle/ DE	3	Structure	70,177	300,007	3 43,700	220,332	7 121,004	3 003,420
3.3									
3.4					\$ -		\$ -		\$ -
3.5	Install Grounding and Grounding Accessories	15	Pole	\$ 506	\$ 7,590	\$ 5,539	\$ 83,078	\$ 6,045	\$ 90,668
3.6					\$ -		\$ -		\$ -
3.7					\$ -		\$ -		\$ -
3.8					\$ -		\$ - \$ -		\$ - \$ -
3.10					\$ -		\$ -		\$ - \$ -
3.11					\$ -		\$ -		\$ -
3.12					\$ -		\$ -		\$ -
3.13					\$ -		\$ -		\$ -
3.14					\$ -		\$ -		\$ -
3.15					\$ -		\$ -		\$ -
TOTAL - STRU	CTUDES						\$ 311,610		\$ 700.087
					\$ 388,477		\$ 311,610		\$ 700,087
	DR, SHIELDWIRE, OPGW			4.00	<u> </u>	.	<u> </u>	4 500	•
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571	-	LF LF	\$ 1.90 \$ 1.35		\$ 5.00 \$ 5.00	\$ - \$ -	\$ 6.90 \$ 6.35	\$ - \$ -
4.2	(1) 3/8" EHS7 Steel	-	LF	\$ 1.35			\$ -	\$ 5.47	\$ -
4.5	Remove Existing 115kV Cable From Existing Structures	-	Mile		\$ -		\$ -	\$ 30,000.00	\$ -
4.6	Remove Existing OPGW Cable	-	Mile	\$ -	\$ -		\$ -	\$ 12,000.00	\$ -
4.7	Remove Existing EH7	-	Mile	\$ -	\$ -		\$ -	\$ 12,000.00	\$ -
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$ -
4.9		-							
4.10	Rider Poles - Relocated	-	Set	\$ -	\$ -	\$ 3,500	\$ -	\$ 3,500.00	\$ -
4.11	Rider Poles UCTOR, SHIELDWIRE, OPGW:	-	EA	\$ 1,750		7	\$ -	\$ 5,250.00	\$ -
	R, FITTINGS, HARDWARE				\$ -		\$ -		\$ -
5.1N30LATOR	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	-	Assembly	\$ 1,800		\$ 720		\$ 2,520	\$ -
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800		\$ 720		\$ 2,520	\$ -
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	105	Assembly	\$ 900	\$ 94,500	\$ 360	\$ 37,800	\$ 1,260	\$ 132,300
5.5			Assembly		\$ -		\$ -	\$ -	\$ -
5.6	OPGW Assembly - Tangent	14	Assembly	\$ 200		\$ 150	\$ 2,100		\$ 4,900
5.7	OPGW Assembly - Angle / DE	1	Assembly	\$ 250		\$ 150			\$ 400
5.8 5.9	OHSW Assembly - Tangent	- 15	Assembly	\$ 200 \$ 250		\$ 150 \$ 150	\$ - \$ 2,250	\$ 350 \$ 400	\$ - \$ 6,000
5.9	OHSW Assembly - Angle / DE OPGW Splice Boxes	15	Assembly Set	\$ 250 \$ 1,746			\$ 2,250		\$ 6,000 \$ 4,020
5.10	OPGW Splice & Test	1	EA	\$ 1,746				. ,	\$ 5,040
5.12	Spacer - Conductor	-	EA		\$ -		\$ -	\$ 85	\$ -
5.13	Vibration Dampers - Conductor	-	EA	-	\$ -		\$ -	\$ 70	\$ -
				·	1		•		
5.14	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA		\$ -	*	\$ -	\$ 62	\$ -
5.15	Guys, Anchors, and Accessories	-	EA	\$ 720		\$ 885	\$ -	\$ 1,605	\$ -
5.16	Misc. materials (Signs and Markers)	-	Mile	\$ 770	\$ -	\$ 1,006	\$ -	\$ 1,776	\$ -
5.17 5.18					 				
5.18									
5.20									
	LATOR, FITTINGS, HARDWARE				\$ 105,566		\$ 47,094		\$ 152,660
N. Inter	connection Pleasant Valley				\$ 555,918		\$ 1,728,304		\$ 2,284,222
	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				. 333,310		2,7,20,004		
6. IVIOB/DEIVI	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 22,842	\$ 22,842	\$ 22,842	\$ 22,842
	Project Management, Material Handling & Amenities					,- 12	,512	,	,512
	·			•	•				

ltem	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Materia	al Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 132,945	\$ 132,945	\$ 132,945	\$ 132,945
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 22,842	\$ 22,842	\$ 22,842	\$ 22,842
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 22,842	\$ 22,842	\$ 22,842	\$ 22,842
	Engineering									
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 114,211	\$ 114,211	\$ 114,211	\$ 114,211
6.6	LiDAR	1	LS	\$ -	\$	-	\$ 6,853	\$ 6,853	\$ 6,853	\$ 6,853
6.7	Geotech	1	Location	\$ -	\$	-	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 15,990	\$ 15,990	\$ 15,990	\$ 15,990
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 6,853	\$ 6,853	\$ 6,853	\$ 6,853
6.13	Real Estate Costs (New)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 44,473	\$	44,473		\$ -	\$ 44,473	\$ 44,473
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 2,284	\$ 2,284	\$ 2,284	\$ 2,284
TOTAL - MOB	/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	44,473		\$ 351,162		\$ 395,636

Page 57 of 60
N. In. Pleasant Valley SS

NAT & NYPA - T030 - (Segment B)

O. System Upgrade Facilities (Middletown Tap to Shoemaker Line and Cricket Valley to Long Mt. Line)

Estimate Revision: 5 Total: \$ 4,413,551

SYSTEM UPGE	RADE FACILITIES	Estimated Quantity	Unit of Measure	Mat	terial Supply Rate	Mate	erial Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Tot	al Unit Rate		TOTAL
SUF 1	Transmission Line Upgrade Middletown to Shoemaker SS (0.88 Miles)												
1.1	138kV - (1) 1113kcmil 45/7 ACSS "Bluejay" Conductor	29,272.32	LF	\$	4.00	\$	117,089	\$ 5.00	\$ 146,362	\$	9	\$	263,451
1.2	Remove Existing 1033.5kmil ACSR "Ortalon" Conductor and Accessories	0.88	Mile	\$	-	\$	-	\$ 30,000.00	\$ 26,400	\$	30,000	\$	26,400
1.3	Rider Poles	3.00	Sets	\$	1,750.00	\$	5,250	\$ 3,500.00	\$ 10,500	\$	5,250	\$	15,750
1.4	138kV Vertical Tangent Insulator Assembly	18.00	Assembly	\$	900.00	\$	16,200	\$ 560.00	\$ 10,080	\$	1,460	\$	26,280
1.5	138kV Deadend Insulator Assembly	30.00	Assembly	\$	900.00	\$	27,000	\$ 560.00	\$ 16,800	\$	1,460	\$	43,800
	Subtotal SUG 1 Direct Cost					\$	165,539		\$ 210,142			\$	375,681
SUF 2	Transmission Line Upgrade Cricket Valley - Connecticut Border to Long Mountain (3.3 + 6.0 = 9.3 Miles)												
2.1	345kV - (1) 954kcmil 45/7 ACSS "Rail" Conductor (Cricket Vly to Conn Border)	109,771.20	LF	\$	2.50	\$	274,428	\$ 5.00	\$ 548,856	\$	8	\$	823,284
2.2	345kV - (1) 2312kcmil 76/19 ACSS "Thrasher" Conductor (Conn Border to Long Mtn.)	99,792.00	LF	\$	8.00	\$	798,336	\$ 5.00	\$ 498,960	\$	13	\$	1,297,296
2.3	Remove Existing 795 ACSS Conductor and Accessories (Cricket Vly to Conn Border)	3.30	Mile	\$	-	\$	-	\$ 30,000.00	\$ 99,000	\$	30,000	\$	99,000
2.4	Remove Existing 2156kmil ACSS Conductor and Accessories (Conn Border to Long Mtn.)	6.00	Mile	\$	-	\$	-	\$ 30,000.00	\$ 180,000	\$	30,000	\$	180,000
2.5	Rider Poles	10.00	Sets	\$	1,750.00	\$	17,500	\$ 3,500.00	\$ 35,000	\$	5,250	\$	52,500
2.6	345kV Vertical Tangent Insulator Assembly	147.00	Assembly	\$	1,800.00	\$	264,600	\$ 720.00	\$ 105,840	\$	2,520	\$	370,440
2.7	345kV Deadend Insulator Assembly	132.00	Assembly	\$	1,800.00	\$	237,600	\$ 720.00	\$ 95,040	\$	2,520	\$	332,640
	Subtotal SUG 2 Direct Cost					\$	1,592,464		\$ 1,562,696			\$	3,155,160
-	Total Direct Cost (SUF 1 + SUG 2)					\$	1,758,003		\$ 1,772,838			\$	3,530,841
3	Indirect Cost (25% of Direct Cost)					\$	439,501		\$ 443,209		·	\$	882,710
	TOTAL:					Ś	2.197.504		\$ 2.216.047			Ś	4.413.551

NAT - NYPA - T029 - (Segment B Enhanced)

System Upgrade Facilities (Various Stations for Knickerbocker to Pleasant Valley

Estimate Prevision: 5 Total: \$ 14,049,000

SYSTEM UPGI	RADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF SS1	Middletown Tap Transformer Replacement	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 10,878,348	\$ 10,879,000
SUF SS1	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ 360,000	\$ 360,000
SUF SS1	Engineering, T&C, PM, Indirects (25%)		LS %						\$ 2,810,000
SUF SS1	SUF SS1 - TOTAL:				\$ -		\$ -		\$ 14,049,000
SUF SS2	Blank	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS2	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS2	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS2	SUFSS 2 - TOTAL:				\$ -		\$ -		\$ -
SUF SS3	Blank	1	LS					\$ -	\$ -
SUF SS3	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS3	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS3	SUF SS3 - TOTAL:				\$ -		\$ -		\$ -
SUF SS4		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS4	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS4	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS4	SUF SS4 - TOTAL:				\$ -		\$ -		\$ -
SUF SS5		-	LS	\$ -	\$ -	\$ -	\$ -		\$ -
SUF SS5	Removals	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUF SS5	Engineering, T&C, PM, Indirects (15%)		LS %						\$ -
SUF SS5	SUF SS5 - TOTAL:				\$ -		\$ -		\$ -
	STATIONS SUF DIRECT TOTAL:								\$ 11,239,000
	STATIONS SUF INDIRECT TOTAL:								\$ 2,810,000
	STATIONS SUF TOTAL								\$ 14,049,000

	NAT - NYPA - T030 - (Segment B Enhanced)
	ESTIMATE ASSUMPTIONS & CLARIFICATIONS
1	Cost Estimate is based on 2017 rates.
	Construction schedule is in accordance with proposed schedule - we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction
2	schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
3	We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
4	All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
5	We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type. 20% of the total length of the line is assumed to use Type 1 Gravel road and 80% of the line length access to be used wood matting. In addition 75 feet of wood matting is included from the access matting to the work pad area matting. The estimate also include 5,000 square feet of wood matting for each structure work area within the ROW. For the ground restoration (seed, straw and woven mat), 20% of the work pad area included.
6	Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
7	Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
8	Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
9	A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
10	We have assumed that all project details provided are accurate unless noted otherwise.
11	Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
12	A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
13	A contractor allowance of 5.061% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
14	An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
15	A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
16	An allowance of 5% for transmission design and engineering has been included in the total section.
17	An allowance of 8% for substation design and engineering has been included in the total section.
18	An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
19	An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
20	An allowance of 3.75% for substation testing and commissioning has been included in the total section.
21	An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
22	New York state sales tax of 8% is included in all material pricing.
23	An allowance of 1.5% for insurance is included in the DPS sheet.
24	Knickerbocker to Churchtown substation; 0.4 miles of 345kV conductor from the junction have been added.
25	An additional Quantity of 5% have been added to conductors, OPGW, & OHSW for sag and jumpers.
26	Rock excavation depth in Foundation data provided in the proposal.
	Middletown to Shoemaker Line upgrade: The length of the line segment is 0.88 miles
	-The re-conductor will remove the existing 2 bundle 1033.5 ACSR conductor and install new 2 bundle Bluejay 1113 ACSS conductor
27	-The Insulators and associated conductor hardware will be replaced
	-The existing structures are assumed to have adequate strength to support the new conductors
	-The estimate is a rough order of magnitude estimate as no engineering was performed and SECo did not have access to record drawings.
	Cricket Valley to Long Mountain line upgrade: The length of the re-conductor between Cricket Valley and the NY/CT border is 3.3 miles and will remove the existing (to be installed on CV project) 2 bundle 795 ACSS conductor and install new 2 bundle Rail 954 ACSS conductor.
	The length of the re-conductor between the NY/CT border and Long Mountain is 6 miles and will remove the existing single 2156 ACSS conductor and install new single Thrasher 2312
28	ACSS conductor.
	-The Insulators and associated conductor hardware will be replaced.
	-The existing structures are assumed to have adequate strength to support the new conductors.
	-The estimate is a rough order of magnitude estimate as no engineering was performed and SECo did not have access to record drawings.
29	The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.



		ITC (T032)	
		Description	Total Amount (In thousand \$)
	1	Transmission Lines	
	1.1	Clearing & Access	\$35,253
	1.2	Foundations	\$82,888
	1.3	Structures	\$67,205
	1.4	Conductor, Shiedwire and OPGW	\$33,769
	1.5	Insulators, Fitting and Hardwares	\$16,154
		Subtotal (1)	\$235,269
_{ts}	2	Substations	
Direct Cost	2.1	Knickerbocker Substation	\$21,112
irect	2.2	East Greenbush Substation	\$0
	2.3	Schodack Substation	\$0
	2.4	Churchtown Substation	\$1,977
	2.5	Pleasant Valley Substation	\$3,101
	2.6	Substation Interconnections	\$5,764
		Subtotal (2)	\$31,954
		Total (1+2)	\$267,224
		Contractors Mark-up (15% of Total 1+2)	\$40,084
		Total Direct Cost (A)	\$307,307
	3	Technical Services Costs	
	3.1	Contractor Mobilization / Demobilization	\$2,672
st	3.2	Project Management, Material Handling & Amenities	\$18,202
Indirect Cost	3.3	Engineering	\$16,986
direc	3.4	Testing & Commissioning	\$755
<u>u</u>	3.5	Permitting, Real Estate, Sales Tax and Additional Costs	\$16,833
	3.6	Legal, Env. Lisc. & Permit and Env. Mitigation	\$7,628
		Total Indirect Cost (3)	\$63,075
		Subtotal Project Cost (B=A+3) 2017 \$	\$370,382
	4	Network Upgrade Facilities (NUF)	
	4.1	NUF proposed as element of the Project	\$0
	4.2	NUF identified by System Impact Study (Cricket Valley Line Upgrade)	\$4,417
		Subtotal NUF Cost (C)	\$4,417
		Total Project Cost (B+C) 2017 \$	\$374,799
	_	Total Project Cost 2018 \$	\$386,043

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ITC T032 (Segment B)

Estimate Revision: 5

	ITC T032 (Segment B) Direct Costs	7	Total Each Segment
Direct Labor, Material & Equipment Costs	A. Transmission Line Knickerbocker to Churchtown	\$	78,044,105
Direct Labor, Material & Equipment Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	152,478,922
Direct Labor, Material & Equipment Costs	C. Blue Stores Junction to Blue Stores Substation	\$	4,746,361
Direct Labor, Material & Equipment Costs	D. Knickerbocker 345kV Substation - Install	\$	21,112,147
Direct Labor, Material & Equipment Costs	E. Greenbush Substation - Removal	\$	-
Direct Labor, Material & Equipment Costs	F.	\$	-
Direct Labor, Material & Equipment Costs	G.	\$	-
Direct Labor, Material & Equipment Costs	H. Churchtown Substation - Install	\$	1,977,418
Direct Labor, Material & Equipment Costs	I. Churchtown Substation - Removal	\$	-
Direct Labor, Material & Equipment Costs	J. Pleasant Valley Substation - Install	\$	3,101,141
Direct Labor, Material & Equipment Costs	K. Interconnection Knickerbocker Station	\$	3,068,229
Direct Labor, Material & Equipment Costs	L. Interconnection Churchtown Station	\$	2,061,784
Direct Labor, Material & Equipment Costs	M. Interconnection Milan Station	\$	633,514
Direct Labor, Material & Equipment Costs	N. System Upgrade Facilities (Cricket Valley Line Upgrade)	\$	3,155,160
Direct Labor, Material & Equipment Costs	O. System Upgrade Facilities (Various Stations Knickerbocker to Pleasant Valley)	\$	-
	SUBTOTAL:	\$	270,378,781
	CONTRACTOR MARK-UP (OH&P)	\$	40,556,817
	CONTINGENCY ON ENTIRE PROJECT	\$	-
	TOTAL DIRECT:	\$	310,935,598

	ITC T032 (Segment B) Indirect Costs		Total Each Segment
Indirect Costs	A. Transmission Line Knickerbocker to Churchtown	\$	16,685,500
Indirect Costs	B. Transmission Line Churchtown to Pleasant Valley	\$	30,319,058
Indirect Costs	C. Blue Stores Junction to Blue Stores Substation	\$	936,585
Indirect Costs	D. Knickerbocker 345kV Substation - Install	\$	5,266,744
Indirect Costs	E. Greenbush Substation - Removal	\$	-
Indirect Costs	F.	\$	-
Indirect Costs	G.	\$	-
Indirect Costs	H. Churchtown Substation - Install	\$	475,504
Indirect Costs	I. Churchtown Substation - Removal	\$	-
Indirect Costs	J. Pleasant Valley Substation - Install	\$	754,800
Indirect Costs	K. Interconnection Knickerbocker Station	\$	554,805
Indirect Costs	L. Interconnection Churchtown Station	\$	342,513
Indirect Costs	M. Interconnection Milan Station	\$	111,797
Indirect Costs	N. System Upgrade Facilities (Cricket Valley Line Upgrade)	\$	788,790
Indirect Costs	O. System Upgrade Facilities (Various Stations Knickerbocker to Pleasant Valley)	\$	-
Indirect Costs	Legal and Permitting (Includes Legal, Envir. Lisc. & Permit., and Envir. Mitigation)	\$	7,627,609
	TOTAL INDIR	ECT: \$	63,863,706

TOTAL ESTIMATED COST: \$

A. Transmission Line Knickerbocker to Churchtown

Total: \$ 94,729,605

ITC T032 (Segment B)			
	Supply	Installation	Total
A. Transmission Line Knickerbocker to Churchtown			
1. CLEARING & ACCESS	\$ 11,500	\$ 13,507,953	\$ 13,519,453
2. FOUNDATIONS	\$ 12,695,824	\$ 13,995,790	\$ 26,691,613
3. STRUCTURES	\$ 10,287,616	\$ 11,532,261	\$ 21,819,877
4. CONDUCTOR, SHIELDWIRE, OPGW	\$ 2,339,147	\$ 8,681,855	\$ 11,021,002
5. INSULATORS, FITTINGS, HARDWARE	\$ 3,305,711	\$ 1,686,448	\$ 4,992,160
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ 2,291,184	\$ 14,394,316	\$ 16,685,500
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ 30,930,982	\$ 63,798,623	\$ 94,729,605
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ 30,930,982	\$ 63,798,623	\$ 94,729,605

ITC T032 (Segment B)

Description of Work:

Estimate

Revision:

5

Item	item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sum	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
A. Trans	mission Line Knickerbocker to Churchtown								
1. CLEARING	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	19.0	Acre	\$ -	\$ -	\$ 15,000	\$ 285,000	\$ 15,000	\$ 285,000
1.2	Clearing the ROW - Light (mowing)	61.0	Acre		\$ -	\$ 5,000	\$ 305,000	\$ 5,000	\$ 305,000
1.3	Permanent Access Road	23,126	LF	\$ -	\$ -	\$ 45.00			
1.4	Silt Fence	115,632	LF	\$ -	\$ -	\$ 4.00			\$ 462,528
1.5	Matting - Access and ROW	92,506	LF	\$ -	\$ -	\$ 70.00			
1.6	Matting - To Work Area	12,900	LF	\$ -	\$ -	\$ 70.00			
1.7	Snow Removal	21.9	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	21.9	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	860,000	SF	\$ -	\$ -	\$ 3.52			\$ 3,027,200
1.10	Restoration for Work Pad areas	172,000	SF	\$ -	\$ -	\$ 0.15			
1.11	Temporary Access Bridge	9	EA	\$ -	\$ -	\$ 20,035	\$ 180,315	\$ 20,035	\$ 180,315
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	4	EA	\$ -	\$ -	\$ 4,580	\$ 18,320	\$ 4,580	\$ 18,320
1.14	Maintenance and Protection of Traffic on Public Roads	47	EA	\$ -	\$ -	\$ 4,130			
1.15	Culverts / Misc. Access	10	EA	\$ 750	\$ 7,500	\$ 1,250	\$ 12,500	\$ 2,000	\$ 20,000
1.16	Gates	2	EA	\$ 2,000	\$ 4,000	\$ 2,500	\$ 5,000	\$ 4,500	\$ 9,000
1.17	Concrete Washout Station	2	EA	\$ -	\$ -	\$ 1,850	\$ 3,700	\$ 1,850	\$ 3,700
TOTAL - CLEA	RING & ACCESS:				\$ 11,500		\$ 13,507,953		\$ 13,519,453
2. FOUNDATI	ONS								
2.1	Drilled Pier - 345/115kV D/C Single Pole Delta V-String Tangent Steel 80'	158	EA	\$ 62,926	\$ 9,942,274	\$ 63,600	\$ 10,048,751	\$ 126,525	\$ 19,991,025
2.2	Drilled Pier - 345/115kV D/C Two-Pole Dead End Delta Steel (Dead End) 80'	8	EA	\$ 172,097	\$ 1,376,775	\$ 173,940	\$ 1,391,519	\$ 346,037	\$ 2,768,294
2.3	Drilled Pier - 345/115kV D/C Two-Pole Dead End Delta Steel (Storm Dead End) 80'	8	EA	\$ 172,097	\$ 1,376,775	\$ 173,940	\$ 1,391,519	\$ 346,037	\$ 2,768,294
2.4	Rock Excavation Adder	582.0	СУ	\$ -	\$ -	\$ 2,000	\$ 1,164,000	\$ 2,000	\$ 1,164,000
2.5									
2.6									
2.7									
2.8									
2.9									Page 3 of 38

							Labor & Equipment	Labor & Equipment		
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	te	Material Supply Sum	Supply Rate	Sum	Total Unit Rate	TOTAL
2.10										
2.11										
2.12										
2.13										
2.14										
2.15										
2.16										
2.17										
TOTAL - FOUN	DATIONS:				\$	12,695,824		\$ 13,995,790		\$ 26,691,613
3. STRUCTURE					Ť	12,033,024		13,333,730		20,031,013
3.1	345/115kV D/C Single Pole Delta V-String Tangent Steel 80'	158	Structure	\$ 56,7	95 \$	8,973,610	\$ 34,077	\$ 5,384,166	\$ 90,872	\$ 14,357,776
3.2	345/115kV D/C Two-Pole Dead End Delta Steel (Dead End) 80'	8	Structure	\$ 87,1	35 \$	697,080	\$ 52,281	\$ 418,248	\$ 139,416	\$ 1,115,328
3.3	345/115kV D/C Two-Pole Dead End Delta Steel (Storm Dead End) 80'	6	Structure	\$ 87,1	35 \$	522,810	\$ 52,281	\$ 313,686	\$ 139,416	\$ 836,496
3.4	Remove Existing Foundation	688	EA	\$ -	\$	-	\$ 3,250	\$ 2,236,000	\$ 3,250	\$ 2,236,000
3.5	Remove Existing Structure and Accessories	172	EA	\$ -	\$	-	\$ 12,500	\$ 2,150,000	\$ 12,500	\$ 2,150,000
3.6	Install Grounding and Grounding Accessories	186	Pole	\$ 5	06 \$	94,116	\$ 5,539	\$ 1,030,161		\$ 1,124,277
3.7										
3.8										
3.9										
3.10										
3.11										
3.12										
3.13										
3.14										
TOTAL - STRU	CTURES:				\$	10,287,616		\$ 11,532,261		\$ 21,819,877
	R, SHIELDWIRE, OPGW				Ť	10,207,010		ψ 11/552/201		22,023,077
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	728,482	LF	\$ 1.	90 \$	1,384,116	\$ 5.00	\$ 3,642,410	\$ 6.90	\$ 5,026,526
4.2	(1) OPGW 36 Fiber AC-33/38/571	121,414	LF	\$ 1.	35 \$	163,909	\$ 5.00	\$ 607,070	\$ 6.35	\$ 770,979
4.3	(1) 3/8" EHS7 Steel	121,414	LF		47 \$	57,065	\$ 5.00	\$ 607,070		\$ 664,135
4.4	Remove Existing Cable From Existing Structures	43.8	Mile	-	- \$	-	\$ 30,000	\$ 1,314,000		\$ 1,314,000
4.5	Remove Existing OPGW Cable and Accessories	21.9	Mile		- \$		\$ 12,000	\$ 262,800		\$ 262,800
4.6	Remove Existing OHSW and Accessories	21.9	Mile	-	- \$		\$ 12,000 \$ 5.00	\$ 262,800		\$ 262,800
4.7	115kV - (1) 954kcmil 54/7 ACSS "Cardinal" Rider Poles (47 Locations)	364,241 24	LF Set	\$ 1,7	90 \$	692,058 42,000	\$ 5.00 \$ 3,500	\$ 1,821,205 \$ 84,000	-	\$ 2,513,263 \$ 126,000
4.8	Rider Poles - Relocated	23	Set	7 -7:	- Ś		\$ 3,500	\$ 80,500	\$ 3,500.00	\$ 80,500
4.10		25			Ť		, 3,500	. 23,300	. 2,220.00	. 23,000
4.11										
4.12										
4.13										
4.14					_					
4.15 4.16										
4.16					-					
	LUCTOR, SHIELDWIRE, OPGW:				\$	2,339,147		\$ 8,681,855		\$ 11,021,002
	, FITTINGS, HARDWARE									, ,,,,,
5.1	345kV Mono Pole Vertical Tangent - V-String (1-Group of 18-Bells Each Assembly)	948	Assembly	\$ 1,8	00 \$	1,706,400	\$ 720	\$ 682,560	\$ 2,520	\$ 2,388,960
5.2	115kV Mono Pole Vertical Tangent - V-String (1-Group of 9-Bells Each Assembly)	948	Assembly	\$ 9	00 \$	853,200	\$ 560	\$ 530,880	\$ 1,460	\$ 1,384,080
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	168	Assembly	\$ 1,8	00 \$	302,400	\$ 720	\$ 120,960	\$ 2,520	\$ 423,360
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	84	Assembly	\$ 9	00 \$	75,600	\$ 560	\$ 47,040	\$ 1,460	\$ 122,640
5.5					\$			\$ -		\$ -
5.6			Assembly	\$ 1,8	00 \$	-	\$ 720	\$ -	\$ 2,520	\$ -

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Su		bor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	то	TAL
5.7			Assembly	\$ 3,600	\$ -	\$	1,440	\$ -	\$ 5,040	\$	-
5.8	OPGW Assembly - Tangent	158	Assembly	\$ 200	\$ 31,6	00 \$	150	\$ 23,700	\$ 350	\$	55,300
5.9	OPGW Assembly - Angle / DE	28	Assembly	\$ 250	\$ 7,0	00 \$	150	\$ 4,200	\$ 400	\$	11,200
5.10	OHSW Assembly - Tangent	158	Assembly	\$ 200	\$ 31,6	00 \$	150	\$ 23,700	\$ 350	\$	55,300
5.11	OHSW Assembly - Angle / DE	28	Assembly	\$ 250	\$ 7,0	00 \$	150	\$ 4,200	\$ 400	\$	11,200
5.12	OPGW Splice Boxes	8	Set	\$ 1,746	\$ 13,9	69 \$	2,274	\$ 18,192	\$ 4,020	\$	32,161
5.13	OPGW Splice & Test	8	EA	\$ 2,520	\$ 20,1	60 \$	2,520	\$ 20,160	\$ 5,040	\$	40,320
5.14	Spacer - Conductor	3,642	EA	\$ 50	\$ 182,1	00 \$	35	\$ 127,470	\$ 85	\$	309,570
5.15	Vibration Dampers - Conductor	1,311	EA	\$ 35	\$ 45,8	85 \$	35	\$ 45,885	\$ 70	\$	91,770
5.16	Shield wire / OPGW Dampers, Misc. Fittings	442	EA	\$ 27	\$ 11,9	34 \$	35	\$ 15,470	\$ 62	\$	27,404
5.17											
5.18											
5.19											
5.20											
5.21	Guys, Anchors, and Accessories	-	EA	\$ 720	\$ -	\$	885	\$ -	\$ 1,605	\$	-
5.22	Misc. materials (Signs and Markers)	21.9	Mile	\$ 770	\$ 16,8	63 \$	1,006	\$ 22,031	\$ 1,776	\$	38,894
5.23		-		\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
TOTAL - INSUL	ATORS, FITTINGS, HARDWARE:				\$ 3,305,7	11		\$ 1,686,448		\$	4,992,160
A. Trans	mission Line Knickerbocker to Churchtown				\$ 28,639,7	98		\$ 49,404,307		\$ 7	78,044,105
6. MOB/DEMO	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$	780,441	\$ 780,441	\$ 780,441	\$	780,441
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$	3,755,170	\$ 3,755,170	\$ 3,755,170	\$	3,755,170
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$	780,441	\$ 780,441	\$ 780,441	\$	780,441
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	_	780,441	\$ 780,441	\$ 780,441	\$	780,441
0.4	Engineering			7	,	- -	700,441	7 700,441	7 700,441	7	700,441
6.5	Design Engineering	1	LS	\$ -	\$ -	Ś	3,902,205	\$ 3,902,205	\$ 3,902,205	\$	3,902,205
6.6	LiDAR	1	LS	\$ -	\$ -		234,132	\$ 234,132	\$ 234,132	\$	234,132
6.7	Geotech	22	Location	\$ -	\$ -		3,500	\$ 77,000	\$ 3,500	\$	77,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	Ś	546,309	\$ 546,309	\$ 546,309	\$	546,309
	Testing & Commissioning		-			1	,				
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$	40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs						,			-	
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$	234,132	\$ 234,132	\$ 234,132	\$	234,132
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$	3,186,000	\$ 3,186,000	\$ 3,186,000	\$	3,186,000
6.15	Legal Fees	÷	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
6.17		-	LS	\$ -	\$ -	\$	-	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$ 2,291,184	\$ 2,291,1	84 \$	-	\$ -	\$ 2,291,184	-	2,291,184
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS	,	\$ -	\$	78,044	\$ 78,044	\$ 78,044	\$	78,044

ITC T032 (Segment B) B. Transmission Line Churchtown to Pleasant Valley

Estimate Revision: 5 Total: \$ 182,797,981

ITC T032 (Segment B)			
	Supply	Installation	Total
B. Transmission Line Churchtown to Pleasant Valley			
1. CLEARING & ACCESS	\$ 14,000	\$ 20,315,402	\$ 20,329,402
2. FOUNDATIONS	\$ 21,569,255	\$ 33,464,251	\$ 55,033,507
3. STRUCTURES	\$ 17,229,070	\$ 26,612,906	\$ 43,841,976
4. CONDUCTOR, SHIELDWIRE, OPGW	\$ 4,553,240	\$ 17,722,775	\$ 22,276,015
5. INSULATORS, FITTINGS, HARDWARE	\$ 7,182,734	\$ 3,815,288	\$ 10,998,023
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ 4,043,864	\$ 26,275,194	\$ 30,319,058
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ 54,592,164	\$ 128,205,817	\$ 182,797,981
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ 54,592,164	\$ 128,205,817	\$ 182,797,981

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
B. Trans	mission Line Churchtown to Pleasant Valley								
1. CLEARING 8									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	91.0	Acre	\$ -	\$ -	\$ 5,000	\$ 455,000		
1.3	Permanent Access Road	33,897.6	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	169,488.0	LF	\$ -	\$ -		\$ 677,952		\$ 677,952
1.5	Matting - Access and ROW	135,590.4	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	18,750.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	32.1	Mile	\$ -	\$ -	\$ 16,000	\$ 513,600		
1.8	ROW Restoration	32.1	Mile	\$ -	\$ -	\$ 10,000	\$ 321,000		
1.9	Work Pads	1,490,000.0	SF	\$ -	\$ -	\$ 4	\$ 5,244,800		\$ 5,244,800
1.10	Restoration for Work Pad areas	298,000.0	SF	\$ -	\$ -	\$ 0.2			
1.11	Temporary Access Bridge	14	EA	\$ -	\$ -	\$ 20,035	\$ 280,490		
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	12	EA	\$ -	\$ -	\$ 4,580	\$ 54,960		
1.14	Maintenance and Protection of Traffic on Public Roads	86	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	4	EA	\$ 2,000			\$ 10,000		
1.16	Culverts / Misc. Access	8	EA	\$ 750					
1.17	Concrete Washout Station	10	EA	\$ -	\$ -	\$ 1,850	\$ 18,500	\$ 1,850	
	RING & ACCESS:				\$ 14,000		\$ 20,315,402		\$ 20,329,402
2. FOUNDATION 2.1	Drilled Pier - 345/115kV Triple Circuit Two-Pole V-String Frame Tangent Steel 85'	279	EA	\$ 59,729	\$ 16,664,495	\$ 60,369	\$ 16,842,964	\$ 120,098	\$ 33,507,459
2.2	Drilled Pier - 345/115kV Triple Circuit Three-Pole Dead End Delta Steel (Dead End) 85'	12	EA	\$ 258,145	\$ 3,097,743	\$ 260,910	\$ 3,130,919	\$ 519,055	\$ 6,228,662
2.3	Drilled Pier - 345/115kV Triple Circuit Three-Pole Dead End Delta Steel (Storm Dead End) 85'	7	EA	\$ 258,145	\$ 1,807,017	\$ 260,910	\$ 1,826,369	\$ 519,055	\$ 3,633,386
2.4									
2.5	Rock Excavation Adder	5,832.0	СҮ	\$ -	\$ -	\$ 2,000	\$ 11,664,000	\$ 2,000	\$ 11,664,000
2.6									
2.7									
2.8									
2.9									
2.5									Dogg 6 of 29

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL	,
2.10										
2.11										
2.12 TOTAL - FOUN	DATIONS				ć 21 FGO 2FF		\$ 33.464.251		\$ 55,03	22 507
3. STRUCTURE					\$ 21,569,255		\$ 33,464,251		\$ 55,03	33,507
3.1	345/115kV Triple Circuit Two-Pole V-String Frame Tangent Steel 85'	279	Structure	\$ 53,280	\$ 14,865,120	\$ 31,968	\$ 8,919,072	\$ 85,248	\$ 23.78	84,192
3.2	345/115kV Triple Circuit Three-Pole Dead End Delta Steel (Dead End) 85'	12	Structure	\$ 108,040	\$ 1,296,480	\$ 64,824	\$ 777,888	\$ 172,864		74,368
3.3	345/115kV Triple Circuit Three-Pole Dead End Delta Steel (Storm Dead End) 85'	7	Structure	\$ 108,040	\$ 756,280	\$ 64,824	\$ 453,768	, , , , , , , , , , , , , , , , , , , ,		10,048
3.4	Remove Existing Foundation	2,048	EA	\$ -	\$ -	\$ 3,250				556,000
3.5	Remove Existing Structure and Accessories	512	EA	\$ -	\$ -	\$ 12,500	\$ 6,400,000	\$ 12,500	\$ 6,40	00,000
3.6	Install Grounding and Grounding Accessories	615	Pole	\$ 506	\$ 311,190	, , , , , , , , , , , , , , , , , , , ,	\$ 3,406,178			17,368
3.7	instance of our and of our ampricessories	013	1 0.0	Ţ 300	ψ 311/130	ÿ 3,333	\$ 3,100,270	φ 0,0.13	Ψ 3,7.	
3.8										
3.9										
										-
3.10				-						
3.11				-						
3.12										
3.13										
3.14										
3.15										
3.16										
3.17										
TOTAL - STRU	CTURES PRINCTOWN TO NEW SCOTLAND:				\$ 17,229,070		\$ 26,612,906		\$ 43,84	41,976
4. CONDUCTO	R, SHIELDWIRE, OPGW									
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	1,094,386	LF.	\$ 1.90			\$ 5,471,930			51,263
4.2	(1) OPGW 36 Fiber AC-33/38/571	182,398	LF LF	\$ 1.35			\$ 911,990			.58,227
4.3	(1) 3/8" EHS7 Steel	182,398 130.4	Mile	\$ 0.47	\$ 85,727	\$ 5.00 \$ 30.000	\$ 911,990	\$ 5.47 \$ 30,000.00		97,717
4.5	Remove Existing 115kV Cable From Existing Structures Remove Existing OPGW Cable and Accessories	32.3	Mile	+	\$ -	\$ 30,000 \$ 12,000	\$ 3,912,000 \$ 387,600			12,000 87,600
4.7	Remove Existing OHSW and Accessories	32.3	Mile	•	\$ -	\$ 12,000	\$ 387,600			87,600
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	1,087,733	LF	\$ 1.90	·		\$ 5,438,665			05,358
4.9		2,001,100		7	-,,	7 0.00	7 2,100,000	7	7	
4.10	Rider Poles - Relocated	43	Set	\$ -	\$ -	\$ 3,500	\$ 150,500	\$ 3,500.00	\$ 1!	50,500
4.11	Rider Poles (86 Total)	43	EA	\$ 1,750						25,750
TOTAL: COND	UCTOR, SHIELDWIRE, OPGW:				\$ 4,553,240		\$ 17,722,775		\$ 22,2	76,015
5. INSULATOR	, FITTINGS, HARDWARE									
5.1	345kV Mono Pole Vertical Tangent - V-String (1-Group of 18-Bells Each Assembly)	1,674	Assembly	\$ 1,800	\$ 3,013,200		\$ 1,205,280	\$ 2,520		18,480
5.2	115kV Mono Pole Vertical Tangent - V-String (1-Group of 9-Bells Each Assembly)	3,348	Assembly	\$ 900	\$ 3,013,200	\$ 560	\$ 1,874,880	\$ 1,460	\$ 4,88	88,080
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	228	Assembly	\$ 1,800	·					74,560
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	228	Assembly	\$ 900	\$ 205,200	\$ 560	\$ 127,680	\$ 1,460	\$ 33	32,880
5.5	OPGW Assembly - Tangent	279	Assembly	\$ 200	\$ 55,800	\$ 150	\$ 41,850	\$ 350	\$ 9	97,650
5.6	OPGW Assembly - Angle / DE	38	Assembly	\$ 250	\$ 9,500	\$ 150	\$ 5,700	\$ 400	\$:	15,200
5.7	OHSW Assembly - Tangent	279	Assembly	\$ 200	\$ 55,800		\$ 41,850			97,650
5.8	OHSW Assembly - Angle / DE	38	Assembly	\$ 250						15,200
5.9	OPGW Splice Boxes	12	Set	\$ 1,746						48,242
5.10	OPGW Splice & Test	12	EA	\$ 2,520						60,480
5.11	Spacer - Conductor	5,414	EA	\$ 50						60,190
5.12	Vibration Dampers - Conductor Shieldwire / ORGW Dampers - Mice Fittings	1,299	EA EA	\$ 35						90,930
5.13 5.14	Shieldwire / OPGW Dampers, Misc. Fittings Guys, Anchors, and Accessories	656	EA EA	\$ 27 \$ 720		\$ 35 \$ 885		\$ 62 \$ 1,605		40,672
5.14	Misc. materials (Signs and Markers)	32.6	Mile	\$ 720						57,809
	ATORS, FITTINGS, HARDWARE:	32.6	iville		\$ 7,182,734	1,006	\$ 32,745	1,//6		98,023
					7,102,734		7 3,013,200		7 10,9	20,023

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Mat	erial Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
B. Transi	mission Line Churchtown to Pleasant Valley				\$	50,548,300		\$ 101,930,622		\$	152,478,922
6. MOB/DEMO	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS										
	Contractor Mobilization / Demobilization										
6.1	Mob / Demob	1	LS	\$ -	\$	-	\$ 1,524,789	\$ 1,524,789	\$ 1,524,789	\$	1,524,789
	Project Management, Material Handling & Amenities										
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 7,336,676	\$ 7,336,676	\$ 7,336,676	\$	7,336,676
6.3	Utility PM and Project Oversite	1	LS		\$	-	\$ 1,524,789	\$ 1,524,789	\$ 1,524,789	\$	1,524,789
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$	-	\$ 1,524,789	\$ 1,524,789	\$ 1,524,789	\$	1,524,789
	Engineering									1	
6.5	Design Engineering	1	LS	\$ -	\$	-	\$ 7,623,946	\$ 7,623,946	\$ 7,623,946	\$	7,623,946
6.6	Lidar	1	LS	\$ -	\$	-	\$ 457,437	\$ 457,437	\$ 457,437	\$	457,437
6.7	Geotech	33	Location	\$ -	\$	-	\$ 3,500	\$ 115,500	\$ 3,500	\$	115,500
6.8	Surveying/Staking	1	LS	\$ -	\$	-	\$ 1,067,352	\$ 1,067,352	\$ 1,067,352	\$	1,067,352
	Testing & Commissioning										
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 40,000	\$ 40,000	\$ 40,000	\$	40,000
	Permitting and Additional Costs										
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 457,437	\$ 457,437	\$ 457,437	\$	457,437
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$	-	\$ 4,450,000	\$ 4,450,000	\$ 4,450,000	\$	4,450,000
6.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$	-
6.18	Sales Tax on Materials	1	LS	\$ 4,043,864	\$	4,043,864	\$ -	\$ -	\$ 4,043,864	\$	4,043,864
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 152,479	\$ 152,479	\$ 152,479	\$	152,479
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				Ś	4,043,864		\$ 26,275,194		Ś	30,319,058

ITC T032 (Segment B) C. Blue Stores Junction to Blue Stores Substation

Estimate Revision: 5 Total: \$ 5,682,945

ITC T032 (Segment B)			
	Supply	Installation	Total
C. Blue Stores Junction to Blue Stores Substation			
1. CLEARING & ACCESS	\$ -	\$ 1,404,512	\$ 1,404,512
2. FOUNDATIONS	\$ 236,848	\$ 925,954	\$ 1,162,802
3. STRUCTURES	\$ 596,484	\$ 946,665	\$ 1,543,149
4. CONDUCTOR, SHIELDWIRE, OPGW	\$ 84,763	\$ 387,095	\$ 471,858
5. INSULATORS, FITTINGS, HARDWARE	\$ 107,544	\$ 56,496	\$ 164,040
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$ 82,051	\$ 854,534	\$ 936,585
CONTRACTOR MARK-UP (OH&P)	\$ -	\$ -	\$ -
SUBTOTAL:	\$ 1,107,690	\$ 4,575,256	\$ 5,682,945
CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -
TOTAL:	\$ 1,107,690	\$ 4,575,256	\$ 5,682,945

Description of Work:

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
C. Blue S	tores Junction to Blue Stores Substation								
1. CLEARING &	ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	4.0	Acre	\$ -	\$ -	\$ 5,000	\$ 20,000	\$ 5,000	\$ 20,000
1.3	Permanent Access Road	2,218	LF	\$ -	\$ -	\$ 45			
1.4	Silt Fence	11,088.0	LF	\$ -	\$ -	\$ 4			
	Matting - Access and ROW	8,870	LF	\$ -	\$ -	\$ 70			
1.6	Matting - To Work Area	1,800.0	LF	\$ -	\$ -	\$ 70			
1.7	Snow Removal	2.1	Mile	\$ -	\$ -	\$ 16,000			
1.8	ROW Restoration	2.1	Mile	\$ -	\$ -	\$ 10,000			
1.9	Work Pads	120,000.0	SF	\$ -	\$ -	\$ 4			
1.10	Restoration for Work Pad areas	24,000.0	SF	\$ -	\$ -	\$ 0.2			
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035		\$ 20,035	
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445		\$ 14,445	
1.13	Stabilized Construction Entrance	1	EA	\$ -	\$ -	\$ 4,580			
1.14	Maintenance and Protection of Traffic on Public Roads	2	EA	\$ -	\$ -	\$ 4,130			
1.15	Gates	-	EA	\$ 2,000		\$ 2,500		\$ 4,500	
1.16	Culverts / Misc. Access	-	EA	\$ 750	t .	\$ 1,250		\$ 2,000	
1.17	Concrete Washout Station	-	EA	\$ -	\$ -	\$ 1,850		\$ 1,850	
TOTAL - CLEAR					\$ -		\$ 1,404,512		\$ 1,404,512
2. FOUNDATIO	NS .								
2.1	Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE	6	EA	\$ 31,225	\$ 187,348	\$ 31,559	\$ 189,354	\$ 62,784	\$ 376,702
2.2	Direct Embed - 115kV Single Circuit H- Pole Tangent	18	EA	\$ 2,750	\$ 49,500	\$ 18,700	\$ 336,600	\$ 21,450	\$ 386,100
2.3	Rock Excavation Adder	200.0	CY	\$ -	\$ -	\$ 2,000	\$ 400,000	\$ 2,000	\$ 400,000
2.4									
2.5									
2.6									
2.7									
2.8									
2.9									
2.10									
2.11									
2.12									
2.13									D 0 520

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.14									
2.15 TOTAL - FOUNI	DATIONS				\$ 236,848		\$ 925,954		Ć 1.162.003
3. STRUCTURES					\$ 236,848		\$ 925,954		\$ 1,162,802
3.1	115kV Single Circuit H- Pole Angle/ DE	6	Structure	\$ 39,822	\$ 238,929	\$ 23,893	\$ 143,358	\$ 63,714	\$ 382,287
3.2	115kV Single Circuit H- Pole Tangent	18		\$ 18,515	\$ 333,266		\$ 199,960		\$ 533,226
3.3	Remove Existing Foundation	-	EA	\$ -	\$ -	\$ 7,500	\$ -		\$ -
3.4	Remove Existing Structure and Accessories	27	EA	\$ -	\$ -	\$ 12,500	\$ 337,500	\$ 12,500	\$ 337,500
3.5						, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , , , , ,	, ,,,,,,
3.6	Install Grounding and Grounding Accessories	48	Pole	\$ 506	\$ 24,288	\$ 5,539	\$ 265,848	\$ 6,045	\$ 290,136
3.7									
3.8									
3.10									
3.11									
3.12									
3.13									
3.14 3.15									
TOTAL - STRUC	TURES:				\$ 596,484		\$ 946,665		\$ 1,543,149
	R, SHIELDWIRE, OPGW				. 550,104		. 5.0,305		. 2,5 .5,245
4.1	345kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ -	\$ -	\$ 5.00	\$ -	\$ 5.00	\$ -
4.2	(1) OPGW 36 Fiber AC-33/38/571	-	LF	\$ -	\$ -	\$ 5.00	\$ -	\$ 5.00	\$ -
4.3	(1) 3/8" EHS7 Steel	-	LF	\$ -	\$ -	\$ 5.00	\$ -	\$ 5.00	\$ -
4.4	115kV - (1) 795kcmil 26/7 ACSR "Drake"	34,927.0	LF	\$ 1.72	\$ 60,074	\$ 5.00	\$ 174,635	\$ 6.72	\$ 234,709
4.5	(1) OPGW 36 Fiber AC-33/38/571	11,642.0	LF	\$ 1.35	\$ 15,717	\$ 5.00	\$ 58,210	\$ 6.35	\$ 73,927
4.6	(1) 3/8" EHS7 Steel	11,642.0	LF	\$ 0.47	\$ 5,472	\$ 5.00	\$ 58,210	\$ 5.47	\$ 63,682
4.7	Remove Existing Cable	2.1	Mile	\$ -		\$ 30,000	\$ 63,600		
4.8	Remove Existing OPGW Cable and Accessories	-	Mile	\$ -		\$ 12,000	\$ -	\$ 12,000.00	
4.9	Remove Existing OHSW and Accessories	2.1	Mile	\$ -	\$ -	\$ 12,000	\$ 25,440	\$ 12,000.00	\$ 25,440
4.10		-							
4.11	Didan Dalan (Laurkiana)	-	FA	\$ 1.750	ć 2.500	ć 2.500	ć 7,000	\$ 5,250,00	ć 10.500
4.12 4.13	Rider Poles (Locations)	2.0	EA	\$ 1,750	\$ 3,500	\$ 3,500	\$ 7,000	\$ 5,250.00	\$ 10,500
	JCTOR, SHIELDWIRE, OPGW:				\$ 84,763		\$ 387,095		\$ 471,858
	FITTINGS, HARDWARE				Ş 04,703		307,033		7 471,030
	345kV Mono Pole Vertical Tangent - V-String (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -	\$ 2,520	\$ -
5.2	115kV Mono Pole Vertical Tangent - V-String (1-Group of 9-Bells Each Assembly)	54	Assembly	\$ 900	\$ 48,600	\$ 360	\$ 19,440	\$ 1,260	\$ 68,040
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,800	\$ -	\$ 720	\$ -		\$ -
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	36	Assembly	\$ 900	\$ 32,400	\$ 360	\$ 12,960		\$ 45,360
5.5	ORCH/ Assambly Tangant	100	Assembly	ć 200	\$ -	ć 450	\$ -	\$ -	\$ -
5.6 5.7	OPGW Assembly - Tangent OPGW Assembly - Angle / DE	18 12	Assembly Assembly				\$ 2,700 \$ 1,800		\$ 6,300 \$ 4,800
5.8	OHSW Assembly - Tangent	18	Assembly	\$ 250	\$ 3,600		\$ 2,700		\$ 6,300
5.9	OHSW Assembly - Tangent OHSW Assembly - Angle / DE	12	Assembly	\$ 250			\$ 1,800		\$ 4,800
5.10	OPGW Splice Boxes	2	Set		\$ 3,492		\$ 4,548		\$ 8,040
5.11	OPGW Splice & Test	2	EA	\$ 2,520	\$ 5,040	\$ 2,520	\$ 5,040	\$ 5,040	\$ 10,080
5.12	Spacer - Conductor	-	EA	\$ 50	\$ -	\$ 35	\$ -	\$ 85	\$ -
	Vibration Dampers - Conductor	72	EA	\$ 35					
	Shieldwire / OPGW Dampers, Misc. Fittings	25	EA	\$ 27					
	Guys, Anchors, and Accessories	-	EA	\$ 720		\$ 885		\$ 1,605	
	Misc. materials (Signs and Markers)	2.1	Mile	\$ 770	\$ 1,617	\$ 1,006	\$ 2,113	\$ 1,776	\$ 3,730
5.17	ATORS, FITTINGS, HARDWARE:				\$ 107,544		\$ 56,496		\$ 164,040
	tores Junction to Blue Stores Substation				\$ 1,025,639		\$ 3,720,722		\$ 4,746,361
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				7 1,023,039		3,720,722		4,740,301
	Contractor Mobilization / Demobilization								
		1		l	I				Page 10 of 38

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 228,376	\$ 228,376	\$ 228,376	\$ 228,376
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 47,464	\$ 47,464	\$ 47,464	\$ 47,464
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 237,318	\$ 237,318		
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.7	Geotech	2	Location	\$ -	\$ -	\$ 3,500	\$ 7,000	\$ 3,500	\$ 7,000
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 33,225	\$ 33,225	\$ 33,225	\$ 33,225
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 14,239	\$ 14,239	\$ 14,239	\$ 14,239
6.13	Real Estate Costs (New ROW)	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Real Estate Costs (Incumbent Utility ROW)	1	LS	\$ -	\$ -	\$ 153,000	\$ 153,000	\$ 153,000	\$ 153,000
6.15	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.18	Sales Tax on Materials	1	LS	\$ 82,051	\$ 82,051	\$ -	\$ -	\$ 82,051	\$ 82,051
6.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 4,746	\$ 4,746	\$ 4,746	\$ 4,746
OTAL - MOB	JOEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 82,051		\$ 854,534		\$ 936,585

ITC T032 (Segment B) D. Knickerbocker 345kV Substation - Install

Estimate Revision: 5 Total: \$ 26,378,891

ITC T032 (Segmen	ITC T032 (Segment B)											
		Supply	Installation		Total							
D. Knickerbocker 345kV Substation - Install												
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	307,450	\$ 3,237,850	\$	3,545,300							
2. SUBSTATION FOUNDATIONS	\$	1,648,569	\$ 1,775,150	\$	3,423,719							
3. SUBSTATION STRUCTURES	\$	846,190	\$ 846,190	\$	1,692,380							
4. MAJOR EQUIPTMENT	\$	756,000	\$ 420,000	\$	1,176,000							
5. SMALL EQUIPTMENT / MATERIALS	\$	1,802,280	\$ 973,500	\$	2,775,780							
6. CONTROL HOUSE / PANELS	\$	2,534,025	\$ 1,641,025	\$	4,175,050							
7. MISC ITEMS	\$	1,537,224	\$ 2,786,694	\$	4,323,918							
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	754,539	\$ 4,512,205	\$	5,266,744							
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-							
SUBTOTAL:	\$	10,186,277	\$ 16,192,614	\$	26,378,891							
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-							
TOTAL:	\$	10,186,277	\$ 16,192,614	\$	26,378,891							

Description of Work:

Item	ltem Description	Estimated Quantity	Unit of Measure	Ma	aterial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
D. Knicke	erbocker 345kV Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	7.4	ACRES	\$	-	\$ -	\$ 355,000	\$ 2,627,000	\$ 355,000	\$ 2,627,000
1.2	Station stone within substation fence.	2,400	СУ	\$	27	\$ 64,800	\$ 75	\$ 180,000	\$ 102	\$ 244,800
1.3	Substation Fence	2,200	LF	\$	100	\$ 220,000	\$ 100	\$ 220,000	\$ 200	\$ 440,000
1.4										
1.5										
1.6	Permanent Access Road - 20'-Wide	490	LF	\$	35	\$ 17,150	\$ 285	\$ 139,650	\$ 320	\$ 156,800
1.7	Pavement	0	SY	\$	-	\$ -	\$ 55	\$ -	\$ 55	\$ -
1.8	Gates	2	EA	\$	2,000	\$ 4,000	\$ 2,500	\$ 5,000	\$ 4,500	\$ 9,000
1.9	Culverts / Misc. Access	2	EA	\$	750	\$ 1,500	\$ 1,250	\$ 2,500	\$ 2,000	\$ 4,000
1.10	Concrete Washout Station	2	EA	\$	-	\$ -	\$ 1,850	\$ 3,700	\$ 1,850	\$ 3,700
1.11	Remove Existing Concrete Foundation	3	EA	\$	-	\$ -	\$ 7,500	\$ 22,500	\$ 7,500	\$ 22,500
1.12	Remove Existing 3-Pole Structure	3	EA	\$	-	\$ -	\$ 12,500	\$ 37,500	\$ 12,500	\$ 37,500
1.13										
1.14										
1.15										
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 307,450		\$ 3,237,850		\$ 3,545,300
2. SUBSTATION	FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	3	EA	\$	14,940	\$ 44,820	\$ 16,000	\$ 48,000	\$ 30,940	\$ 92,820
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	12	EA	\$	26,145	\$ 313,740	\$ 28,000	\$ 336,000	\$ 54,145	\$ 649,740
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	36	EA	\$	4,482	\$ 161,352	\$ 4,800	\$ 172,800	\$ 9,282	\$ 334,152
2.1f	Station Service Transformer Stand Foundation	4	EA	\$	4,482	\$ 17,928	\$ 4,800	\$ 19,200	\$ 9,282	\$ 37,128
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	66	EA	\$	4,482	\$ 295,812	\$ 4,800	\$ 316,800	\$ 9,282	\$ 612,612
2.1j	Instrument Transformer Stand Foundations	27	EA	\$	4,482	\$ 121,014	\$ 4,800	\$ 129,600	\$ 9,282	\$ 250,614
2.1k	Arrester Stand Foundations	9	EA	\$	4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1m	Wave Trap Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	\$ 27,846
2.1n	Station Service Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p	Reactor Foundations	0	EA	\$	7,470	\$ -	\$ 8,000	\$ -	\$ 15,470	 - 12 of 29

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Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.1q									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,820	\$ -	\$ 48,000	\$ -	\$ 92,820	\$ -
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2f	Fuse Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	3	EA	\$ 5,229	\$ 15,687	\$ 5,600	\$ 16,800	\$ 10,829	\$ 32,487
2.3b	Capacitor Bank Foundations	0	EA	\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	\$ -
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	12	EA	\$ 16,434	\$ 197,208	\$ 17,600	\$ 211,200	\$ 34,034	\$ 408,408
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	\$ -
2.3e	Switch Stand Foundations	14	EA	\$ 2,988	\$ 41,832	\$ 3,200	\$ 44,800	\$ 6,188	\$ 86,632
2.3f	Fuse Stand Foundations	2	EA	\$ 2,988	\$ 5,976	\$ 3,200	\$ 6,400	\$ 6,188	\$ 12,376
2.3g	Bus Support 3ph Foundations	30	EA	\$ 2,988	\$ 89,640	\$ 3,200	\$ 96,000	\$ 6,188	\$ 185,640
2.3h	Bus Support 1 Ph Foundations	15	EA	\$ 2,988	\$ 44,820	\$ 3,200	\$ 48,000	\$ 6,188	\$ 92,820
2.3j	Instrument Transformer Stand Foundations	27	EA	\$ 2,988	\$ 80,676	\$ 3,200	\$ 86,400	\$ 6,188	\$ 167,076
2.3k	Arrester Stand Foundations	9	EA	\$ 2,988	\$ 26,892	\$ 3,200	\$ 28,800	\$ 6,188	\$ 55,692
2.3m	Wave Trap Stand Foundations	3	EA	\$ 2,988	\$ 8,964	\$ 3,200	\$ 9,600	\$ 6,188	\$ 18,564
2.3n	Station Service Foundations	1	EA	\$ 1,121	\$ 1,121	\$ 1,200	\$ 1,200	\$ 2,321	\$ 2,321
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Townshamen Fermidations								
	Transformer Foundations	0	ΓΛ	ć 07.110	ć	ć 104.000	ć	ć 201 110	ć
2.4a 2.4b	345-230kV Transformer Foundation w/ Oil Containment 345-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ 97,110 \$ 74,700	\$ - \$ -		\$ -	\$ 201,110 \$ 154,700	
2.4c	230kV-115kV Transformer Foundation w/ Oil Containment	0	EA	\$ 74,700	\$ -	\$ 80,000	\$ -	\$ 134,700	\$ -
2.4c 2.4d	115kV-69kV Transformer Foundation w/ Oil Containment	0	EA	1	\$ -	\$ -	\$ -		\$ -
2.40	113KV-05KV Hallstofffer Foundation by Oil Containment	0	LA	\$ -	, -	-	-	\$ -	-
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 48,555	\$ 48,555	\$ 52,000	\$ 52,000	\$ 100,555	\$ 100,555
2.5b	Generator Foundation	1	EA	\$ 16,000	\$ 16,000	\$ 17,000	\$ 17,000	\$ 33,000	\$ 33,000
2.5c	Station Service Distribution Line - 3ph.	1	LS	\$ -	\$ -	\$ 9,750	\$ 9,750	\$ 9,750	\$ 9,750
2.6	Lightning Mast Foundations								
2.6a	70' Lightning Mast Foundation	12	EA	\$ 5,229	\$ 62,748				
2.6b				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.6c				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	TATION FOUNDATIONS				\$ 1,648,569		\$ 1,775,150		\$ 3,423,719
	N STRUCTURES								
3.1	345kV	2	ΓΛ.	ć 27.000	ć 111.000	ć 27.000	ć 111 000	ć 74.000	ć 222.000
3.1a	Substation A-Frame Structures - Stand alone	3	EA	\$ 37,000	\$ 111,000	\$ 37,000	\$ 111,000	\$ 74,000	\$ 222,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
3.1b	Substation A-Frame Structures - Shared Column	0	EA	\$ 37,000	\$ -	\$ 37,000	\$ -	\$ 74,000	\$	-
3.1c	Switch Stands	6	EA	\$ 14,800	\$ 88,800	\$ 14,800	\$ 88,800	\$ 29,600	\$	177,600
3.1d	Station Service Transformer Stand	0	EA	\$ 14,800	\$ -	\$ 14,800	\$ -	\$ 29,600	\$	-
3.1e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
3.1f	Bus Support 1 Ph	66	EA	\$ 3,700	\$ 244,200	\$ 3,700	\$ 244,200	\$ 7,400	\$	488,400
3.1g	Instrument Transformer Stand	27	EA	\$ 1,850	\$ 49,950	\$ 1,850	\$ 49,950	\$ 3,700	\$	99,900
3.1h	Arrester Stand	9	EA	\$ 1,850	\$ 16,650	\$ 1,850	\$ 16,650	\$ 3,700	\$	33,300
3.1j	Wave Trap Stand	3	EA	\$ 7,400	\$ 22,200	\$ 7,400	\$ 22,200	\$ 14,800	\$	44,400
3.1k	Lightning Mast - 70'	6	EA	\$ 6,475	\$ 38,850	\$ 6,475	\$ 38,850	\$ 12,950	\$	77,700
3.2	230kV									
3.2a	Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2b	Substation A-Frame Structures - Shared Column	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$	-
3.2c	Switch Stands	0	EA	\$ 12,025	\$ -	\$ 12,025	\$ -	\$ 24,050	\$	-
3.2d	Station Service Transformer Stand	0	EA	\$ 12,025	\$ -	\$ 12,025	\$ -	\$ 24,050	\$	-
3.2e	Bus Support 3ph	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
3.2f	Bus Support 1 Ph	0	EA	\$ 2,775	\$ -	\$ 2,775	\$ -	\$ 5,550	\$	-
3.2g	Instrument Transformer Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$	-
3.2h	Arrester Stand	0	EA	\$ 1,295	\$ -	\$ 1,295	\$ -	\$ 2,590	\$	-
3.2j	Wave Trap Stand	0	EA	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 11,100	\$	-
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$	-
3.3	115kV									
3.3a	Substation A-Frame Structures - Stand alone	3	EA	\$ 18,500	\$ 55,500	\$ 18,500	\$ 55,500	\$ 37,000	\$	111,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ 37,000	\$	-
3.3c	Switch Stands	7	EA	\$ 7,955	\$ 55,685	\$ 7,955	\$ 55,685	\$ 15,910	\$	111,370
3.3d	Fuse Stand	1	EA	\$ 7,955	\$ 7,955	\$ 7,955	\$ 7,955	\$ 15,910	\$	15,910
3.3e	Bus Support 3ph	15	EA	\$ 3,330	\$ 49,950	\$ 3,330	\$ 49,950	\$ 6,660	\$	99,900
3.3f	Bus Support 1 Ph	15	EA	\$ 1,850	\$ 27,750	\$ 1,850	\$ 27,750	\$ 3,700	\$	55,500
3.3g	Instrument Transformer Stand	27	EA	\$ 740	\$ 19,980	\$ 740	\$ 19,980	\$ 1,480	\$	39,960
3.3h	Arrester Stand	9	EA	\$ 740	\$ 6,660	\$ 740	\$ 6,660	\$ 1,480	\$	13,320
3.3j	Wave Trap Stand	3	EA	\$ 3,700	\$ 11,100	\$ 3,700	\$ 11,100	\$ 7,400	\$	22,200
3.3k	Lightning Mast - 70'	6	EA	\$ 6,475	\$ 38,850	\$ 6,475	\$ 38,850	\$ 12,950	\$	77,700
3.31	Station Service Transformer Support Stand	1	EA	\$ 1,110	\$ 1,110	\$ 1,110	\$ 1,110	\$ 2,220	\$	2,220
TOTAL - SUBST	TATION STRUCTURES				\$ 846,190		\$ 846,190		\$	1,692,380
4. MAJOR EQU	IIPTMENT									
4.1	345kV									
4.1a	Circuit Breakers	3	EA	\$ 200,000	\$ 600,000	\$ 80,000	\$ 240,000	\$ 280,000	\$	840,000
4.1b	Capacitor Banks with Reactors	0	EA	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000	\$	-
4.1c					1					
4.1d										
4.1e					1					
4.2	230kV									
	Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	Ś	
4.2b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 80,000		\$ 80,000		
					·	22,300		. 22,300	Ė	
4.3	115kV									
4.3a	Circuit Breakers	3	EA	\$ 52,000	\$ 156,000	\$ 60,000	\$ 180,000	\$ 112,000	\$	336,000
4.3b	Capacitor Banks	0	EA	\$ -	 	\$ 60,000		\$ 60,000		-
					<u> </u>				i -	
TOTAL - MAIO	R EQUIPTMENT				\$ 756,000		\$ 420,000		\$	1,176,000
	**				750,000		420,000		Ÿ	1,170,000

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
5. SMALL EQU	IPTMENT / MATERIALS								
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	3	EA	\$ 40,000	\$ 120,000	\$ 15,000	\$ 45,000	\$ 55,000	\$ 165,000
5.1b	Disconnect Switches - 3ph w/ manual operator	6	EA	\$ 35,000	\$ 210,000	\$ 17,500	\$ 105,000	\$ 52,500	\$ 315,000
5.1c	VT'S	9	EA	\$ 25,000	\$ 225,000	\$ 12,000	\$ 108,000	\$ 37,000	\$ 333,000
5.1d	CT'S	9	EA	\$ 13,000	\$ 117,000	\$ 8,000	\$ 72,000	\$ 21,000	\$ 189,000
5.1e	CCVT'S	9	EA	\$ 13,000	\$ 117,000	\$ 8,000	\$ 72,000	\$ 21,000	\$ 189,000
5.1f	Arresters	9	EA	\$ 6,500	\$ 58,500	\$ 1,500	\$ 13,500	\$ 8,000	\$ 72,000
5.1g	Wave Traps	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ 50,000	\$ -
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000	\$ -	\$ 17,500	\$ -	\$ 47,500	\$ -
5.2c	VT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2d	CT'S	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2e	CCVT'S	0	EA	\$ 10,000	\$ -	\$ 6,000	\$ -	\$ 16,000	\$ -
5.2f	Arresters	0	EA	\$ 5,000	\$ -	\$ 6,000	\$ -	\$ 11,000	\$ -
5.2g	Wave Traps	0	EA	\$ 13,000	\$ -	\$ 8,000	\$ -	\$ 21,000	\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j									
5.3	115kV								
5.3a	Line Switches - 3ph w/ motor operator	3	EA .	\$ 33,000	\$ 99,000	\$ 15,000	\$ 45,000	\$ 48,000	\$ 144,000
5.3b	Disconnect Switches - 3ph w/ manual operator	7	EA	\$ 28,000	\$ 196,000		\$ 122,500	\$ 45,500	\$ 318,500
5.3c	VT'S CT'S	9	EA	\$ 13,000 \$ 13,000	\$ 117,000		\$ 72,000 \$ 72,000	\$ 21,000 \$ 21,000	
5.3d	ccvt's	9	EA EA	\$ 13,000 \$ 8,000	\$ 117,000 \$ 72,000	\$ 8,000 \$ 8,000	\$ 72,000 \$ 72,000	\$ 21,000 \$ 16,000	
5.3e 5.3f	Arresters	9	EA EA	\$ 3,420	\$ 72,000	\$ 6,000	\$ 72,000	\$ 9,420	\$ 144,000 \$ 84,780
5.3g	Wave Traps	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.3h	Station Service Transformers	1	EA	\$ 200,000	\$ 200,000	, ,,,,,,	\$ 50,000	\$ 250,000	
5.3j	Fuses	3	EA	\$ 15,000	\$ 45,000	\$ 7,500	\$ 22,500	\$ 22,500	\$ 67,500
3.3)	1 0303	3	LA	7 13,000	7 43,000	7,300	22,300	22,300	\$ 07,300
TOTAL - SMAL	L EQUIPTMENT / MATERIALS				\$ 1,802,280		\$ 973,500		\$ 2,775,780
6. CONTROL H	OUSE / PANELS / GENERATOR								
6.1	CONTROL HOUSE	1	EA	\$ 468,000	\$ 468,000	\$ 95,000	\$ 95,000	\$ 563,000	\$ 563,000
6.2	Protection and Telecom Equipment Panels	26	EA	\$ 35,000	\$ 910,000	\$ 10,000	\$ 260,000	\$ 45,000	\$ 1,170,000
6.3	125VDC Batteries	2	EA	\$ 75,000	\$ 150,000	\$ 25,000	\$ 50,000	\$ 100,000	\$ 200,000
6.4	Control Cables	1	LS	\$ 641,025	\$ 641,025	\$ 641,025	\$ 641,025	\$ 1,282,050	\$ 1,282,050
6.5	SCADA and Communications	1	EA	\$ 50,000	\$ 50,000	\$ 100,000	\$ 100,000		\$ 150,000
6.6	Low Voltage AC Distribution	2	EA	\$ 50,000	\$ 100,000			\$ 150,000	
6.7	DC Distribution System	2	EA	\$ 50,000	\$ 100,000	\$ 100,000	\$ 200,000	\$ 150,000	\$ 300,000
6.8	Security	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,000
6.9	Fire Alarm	1	EA	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 15,000	\$ 15,000
6.10	Generator	1	EA	\$ 100,000	\$ 100,000	\$ 80,000	\$ 80,000	\$ 180,000	\$ 180,000
TOTAL CONT	POLHOUSE / DANEIS / GENERATOR				ć 2.534.635		ć 4.644.605		ć 437.000
IUIAL - CONT	ROL HOUSE / PANELS / GENERATOR				\$ 2,534,025		\$ 1,641,025		\$ 4,175,050

Item	Item Description	Estimated Quantity	Unit of Measure	Material S	upply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
7. MISC ITEMS											
7.1	Conduit & Cable Trench System	1,540.0	LF	\$	185.00	\$ 284,900	\$ 170.00	\$ 261,800	\$ 355	\$	546,700
7.2	Rigid Bus, Fittings & Insulators	5,000.0	LF	\$	125.07	\$ 625,350	\$ 237.10	\$ 1,185,500	\$ 362	\$	1,810,850
7.3	Strain Bus, Connectors & Insulators	0.0	LF	\$	39.30	\$ -	\$ 53.35	\$ -	\$ 93	\$	-
7.4	Grounding System	26,800.0	LF	\$	6.93	\$ 185,724	\$ 32.58	\$ 873,144	\$ 40	\$	1,058,868
7.5	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050	\$	-
7.6	Strain Bus Insulators - 230kV	0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150	\$	-
7.7	Strain Bus Insulators - 115kV	0	EA	\$	1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$	-
7.8	Low Voltage AC Station Service	1	LS	\$	50,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 125,000	\$	125,000
7.9	SSVT Service	1	LS	\$	45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 90,000	\$	90,000
7.10	Control Conduits from Trench to Equipment	1	LS	\$	166,250	\$ 166,250	\$ 166,250	\$ 166,250	\$ 332,500	\$	332,500
7.11	Misc. Materials (Above and Below Ground)	1	LS	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 360,000	\$	360,000
7.12											
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20											
7.21											
7.22											
7.23											
7.24											
7.25											
TOTAL - MISC	ITEMS					\$ 1,537,224		\$ 2,786,694		\$	4,323,918
D. Knick	erbocker 345kV Substation - Install					\$ 9,431,738		\$ 11,680,409		\$	21,112,147
_	DB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
8.1	Mob / Demob	1.0	LS	\$	-	\$ -	\$ 211,121	\$ 211,121	\$ 211,121	\$	211,121
	Project Management, Material Handling & Amenities										
8.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 1,015,832	\$ 1,015,832	\$ 1,015,832	\$	1,015,832
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 211,121	\$ 211,121	\$ 211,121	\$	211,121
8.4	Site Accommodation, Facilities, Storage	1	LS	\$	-		\$ 211,121	\$ 211,121		\$	211,121
	Engineering						,	,	,		
8.5	Design Engineering	1	LS	\$	-	\$ -	\$ 1,688,972	\$ 1,688,972	\$ 1,688,972	\$	1,688,972
8.6	LiDAR	-	LS	\$	-		\$ -	\$ -	\$ -	\$	-
8.7	Geotech	4	EA	\$	-		\$ 3,500		\$ 3,500	\$	14,000
8.8	Surveying/Staking	1	Site	\$	-		\$ 147,785	. ,			147,785
	Testing & Commissioning						,	,	,		
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$	-	\$ -	\$ 527,804	\$ 527,804	\$ 527,804	\$	527,804
	Permitting and Additional Costs						,	,	,	<u> </u>	
8.10	Environmental Licensing & Permitting Costs	-	LS	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-
8.11	Environmental Mitigation	-	LS	\$	-		\$ -		\$ -	\$	
8.12	Warranties / LOC's	1	LS	\$			\$ 63,336				63,336
8.13	Real Estate Costs (New)	-	LS	\$	-		\$ -		\$ -	\$	
0.13	near Estate 600to (New)	<u> </u>		1,	-	¥ -	¥	· -	¥ "	, D-	

Item	ltem Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Suppl	/ Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$	-	\$	-	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000
8.15	Legal Fees		LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)		LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$	-	\$	-	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$	754,539	\$ 75	4,539	\$ -	\$ -	\$ 754,539	\$ 754,539
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS			\$	-	\$ 21,112	\$ 21,112	\$ 21,112	\$ 21,112
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 75	4,539		\$ 4,512,205		\$ 5,266,744

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ITC T032 (Segment B) H. Churchtown Substation - Install

Total: \$ 2,452,922

ITC T032	(Segment B)					
		Supply		Installation		Total
H. Churchtown Substation - Install						
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	30,835	\$	95,225	\$	126,060
2. SUBSTATION FOUNDATIONS	\$	150,147	\$	160,800	\$	310,947
3. SUBSTATION STRUCTURES	\$	52,000	\$	60,865	\$	121,730
4. MAJOR EQUIPTMENT	\$	52,000	\$	60,000	\$	112,000
5. SMALL EQUIPTMENT / MATERIALS	\$	186,260	\$	130,500	\$	316,760
6. CONTROL HOUSE / PANELS	\$	253,795	\$	178,795	\$	432,590
7. MISC ITEMS	\$	206,790	\$	350,542	\$	557,331
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	75,255	\$	400,249	\$	475,504
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	1,007,082	\$	1,436,975	\$	2,452,922
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-

tion of	tion of Work:

Estimate Revision:

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rat	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
H. Churc	htown Substation - Install								
1. SITE PREP/	GRADING/ FENCING / CIVIL								
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0.25	ACRES	\$ -	\$ -	\$ 230,000	\$ 57,500	\$ 230,000	\$ 57,500
1.2	Station stone within substation fence.	105	CY		7 \$ 2,835				
1.3	Substation Fence	280	LF	\$ 10					
1.4	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.5									
1.6									
1.7									
1.8									
1.9									
1.10									
1.11								 	
1.12									
1.13					+			 	
1.14									
	PREP/ GRADING/ FENCING / CIVIL				\$ 30.835		\$ 95.225		\$ 126,060
	N FOUNDATIONS				\$ 30,633		\$ 95,225		\$ 120,000
2.308314110	345kV								
2.1a	Circuit Breaker Foundations	0	EA	\$ 14,94) \$ -	\$ 16,000	\$ -	\$ 30,940	\$ -
2.1b	Capacitor Bank Foundations	0	EA	\$ 56,02		\$ 60,000		\$ 116,025	
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 26,14		\$ 28,000		\$ 54,145	
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 26,14		\$ 28,000		\$ 54,145	
2.1e	Switch Stand Foundations	0	EA	\$ 4,48		\$ 4,800		\$ 9,282	
2.1f	Station Service Transformer Stand Foundation	0	EA	\$ 4,48		\$ 4,800		\$ 9,282	
2.1g	Bus Support 3ph Foundations	0	EA	Š -	\$ -	Š -	\$ -	\$ -	s -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$ 4,48	2 \$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	0	EA	\$ 4,48	2 \$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1k	Arrester Stand Foundations	0	EA	\$ 4,48	2 \$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1m	Wave Trap Stand Foundations	0	EA	\$ 4,48	2 \$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p									
2.2	230kV								
2.2a	Circuit Breaker Foundations	0	EA	\$ 11,95		\$ 12,800		\$ 24,752	
2.2b	Capacitor Bank Foundations	0	EA	\$ 44,82		\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$ 22,41		\$ 24,000		\$ 46,410	
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 22,41		\$ 24,000		\$ 46,410	
2.2e	Switch Stand Foundations	0	EA	\$ 3,73	5 \$ -	\$ 4,000	\$ -	\$ 7,735	\$ -

						Johan O Carriannant	Labar & Farriannant		
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
2.2f	Station Service Transformer Stand Foundation	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2.2g	Bus Support 3ph Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2h	Bus Support 1 Ph Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2j	Instrument Transformer Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2k	Arrester Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.2m	Wave Trap Stand Foundations	0	EA	\$ 3,735	\$ -		\$ -	\$ 7,735	
2.2n	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.2p									
2.3	115kV								
2.3a	Circuit Breaker Foundations	1	EA	\$ 5,229	\$ 5,229	\$ 5,600	\$ 5,600	\$ 10,829	\$ 10,829
2.3b	Capacitor Bank Foundations	0		\$ 33,615	\$ -	\$ 36,000	\$ -	\$ 69,615	
2.3c	Caisson DE Foundations (for DE A frame str stand alone)	4	EA	\$ 16,434	\$ 65,736		\$ 70,400	\$ 34,034	
2.3d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$ 16,434	\$ -	\$ 17,600	\$ -	\$ 34,034	
2.3e	Switch Stand Foundations	2	EA	\$ 2,988	\$ 5,976			\$ 6,188	
2.3f	Fuse Stand Foundations	0	EA	\$ 2,988	\$ -		\$ -	\$ 6,188	
2.3g	Bus Support 3ph Foundations	2	EA	\$ 2,988	\$ 5,976			\$ 6,188	
2.3h	Bus Support 1 Ph Foundations	3	EA	\$ 2,988	\$ 8,964	\$ 3,200	\$ 9,600	\$ 6,188	\$ 18,564
2.3j	Instrument Transformer Stand Foundations	9	EA	\$ 2,988	\$ 26,892	\$ 3,200	\$ 28,800	\$ 6,188	\$ 55,692
2.3k	Arrester Stand Foundations	3	EA	\$ 2,988	\$ 8,964		\$ 9,600	\$ 6,188	
2.3m	Wave Trap Stand Foundations	1		\$ 2,988	\$ 2,988		\$ 3,200	\$ 6,188	
2.3n	Station Service Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	
2.3p	Misc. Structure Foundations	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.4	Transformer Foundations			4 4	_		_		_
2.4a	345-230kV Transformer Foundation w/ Oil Containment	0		\$ 97,110	\$ -	\$ 104,000	\$ -	\$ 201,110	
2.4b 2.4c	345-115kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ 74,700 \$ -	\$ -	\$ 80,000	\$ - \$ -	\$ 154,700 \$ -	\$ - \$ -
2.4c 2.4d	230kV-115kV Transformer Foundation w/ Oil Containment 115kV-69kV Transformer Foundation w/ Oil Containment	0	EA EA	\$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ - \$ -	\$ -
2.40	113KV-05KV Transformer Foundation Wy On Containment	0	LA	· -	÷ -	, -	· -	· -	-
2.5	Control House Foundations / Pad								
2.5a	Control House / Pad	1	EA	\$ 8,964	\$ 8,964	\$ 9,600	\$ 9,600	\$ 18,564	\$ 18,564
	, , , , , , , , , , , , , , , , , , ,			,					
2.5b	Generator Foundation	0	EA	\$ 16,000	\$ -	\$ 17,000	\$ -	\$ 33,000	\$ -
2.5b 2.5c	Generator Foundation Station Service Distribution Line - 1ph.			\$ 16,000	\$ -		\$ -		\$ -
2.5b 2.5c 2.6	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations	0	EA LS	\$ 16,000	\$ -	\$ 17,000 \$ 6,500	\$ -	\$ 33,000 \$ 6,500	\$ -
2.5b 2.5c	Generator Foundation Station Service Distribution Line - 1ph.	0	EA LS	\$ 16,000	\$ -	\$ 17,000 \$ 6,500	\$ -	\$ 33,000 \$ 6,500	\$ -
2.5b 2.5c 2.6 2.6a	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations	0 0	EA LS EA	\$ 16,000 \$ - \$ 5,229	\$ - \$ - \$ 10,458	\$ 17,000 \$ 6,500 \$ 5,600	\$ - \$ - \$ 11,200	\$ 33,000 \$ 6,500 \$ 10,829 \$ -	\$ - \$ - \$ \$
2.5b 2.5c 2.6 2.6a 2.6b	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations	0 0 2 2	EA LS EA EA	\$ 16,000 \$ - \$ 5,229 \$ -	\$ - \$ - \$ \$ \$ 10,458 \$ -	\$ 17,000 \$ 6,500 \$ 5,600 \$ -	\$ - \$ - \$ \$ \$ 11,200 \$ -	\$ 33,000 \$ 6,500 \$ 10,829 \$ -	\$ - \$ - \$ 21,658 \$ - \$ -
2.5b 2.5c 2.6 2.6a 2.6b 2.6c	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations 70' Lightning Mast Foundation	0 0 2 2	EA LS EA EA	\$ 16,000 \$ - \$ 5,229 \$ -	\$ - \$ - \$ \$ \$ 10,458 \$ -	\$ 17,000 \$ 6,500 \$ 5,600 \$ -	\$ - \$ - \$ \$ \$ 11,200 \$ -	\$ 33,000 \$ 6,500 \$ 10,829 \$ -	\$ - \$ - \$ 21,658 \$ -
2.5b 2.5c 2.6 2.6a 2.6b 2.6c TOTAL - SUBSTATIO	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations 70' Lightning Mast Foundation TATION FOUNDATIONS N STRUCTURES	0 0 2 2	EA LS EA EA	\$ 16,000 \$ - \$ 5,229 \$ -	\$ - \$ - \$ 10,458 \$ - \$ -	\$ 17,000 \$ 6,500 \$ 5,600 \$ -	\$ - \$ - \$ 11,200 \$ - \$ -	\$ 33,000 \$ 6,500 \$ 10,829 \$ -	\$ - \$ - \$ 21,658 \$ - \$ -
2.5b 2.5c 2.6 2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations 70' Lightning Mast Foundation TATION FOUNDATIONS N STRUCTURES 345kV	0 0 0 2 0 0	EA LS EA EA EA	\$ 16,000 \$ - \$ 5,229 \$ - \$ -	\$ - \$ - \$ 10,458 \$ - \$ -	\$ 17,000 \$ 6,500 \$ 5,600 \$ - \$ -	\$ - \$ - \$ 11,200 \$ - \$ - \$ 5	\$ 33,000 \$ 6,500 \$ 10,829 \$ - \$ -	\$ - \$ - \$ 21,658 \$ - \$ - \$ 310,947
2.5b 2.5c 2.6a 2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations 70' Lightning Mast Foundation TATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone	0 0 0 2 0 0	EA LS EA EA EA	\$ 16,000 \$ - \$ 5,229 \$ - \$ - \$ -	\$ - \$ - \$ 10,458 \$ - \$ - \$ 150,147	\$ 17,000 \$ 6,500 \$ 5,600 \$ - \$ - \$ -	\$ - \$ 11,200 \$ - \$ - \$ \$ \$ 160,800	\$ 33,000 \$ 6,500 \$ 10,829 \$ - \$ - \$ -	\$ - \$ - \$ 21,658 \$ - \$ - \$ 310,947
2.5b 2.5c 2.6a 2.6a 2.6b 2.6c TOTAL - SUBSTATIO 3.1 3.1a 3.1b	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations 70' Lightning Mast Foundation TATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column	0 0 0 2 0 0	EA LS EA EA EA	\$ 16,000 \$ - \$ 5,229 \$ - \$ - \$ - \$ 37,000 \$ 37,000	\$ - \$ 10,458 \$ - \$ - \$ 150,147	\$ 17,000 \$ 6,500 \$ 5,600 \$ - \$ - \$ - \$ - \$ 37,000	\$ - \$ 11,200 \$ - \$ - \$ - \$ 160,800	\$ 33,000 \$ 6,500 \$ 10,829 \$ - \$ - \$ - \$ 5 \$ 74,000 \$ 74,000	\$ - \$ - \$ 21,658 \$ - \$ - \$ 310,947
2.5b 2.5c 2.6a 2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1 3.1a 3.1b 3.1c	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations 70' Lightning Mast Foundation FATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands	0 0 2 0 0 0	EA LS EA EA EA EA	\$ 16,000 \$ \$ 5,229 \$ \$ \$ \$ 37,000 \$ 37,000 \$ 14,800	\$ - \$ 10,458 \$ - \$ - \$ 150,147 \$ - \$ - \$ -	\$ 17,000 \$ 6,500 \$ 5,600 \$ - \$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800	\$ - \$ 11,200 \$ - \$ - \$ - \$ 5 \$ 160,800 \$ - \$ - \$ -	\$ 33,000 \$ 6,500 \$ 10,829 \$ - \$ - \$ - \$ 5 \$ 74,000 \$ 74,000 \$ 29,600	\$ - \$ 21,658 \$ - \$ - \$ - \$ 310,947 \$ - \$ - \$ -
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2.5b 2.5c 2.6 2.6a 2.6b 2.6c TOTAL - SUBS' 3. SUBSTATIO 3.1c 3.1d 3.1e 3.1f 3.1g 3.1h 3.1s 3.1h 3.1s 3.2 3.2c 3.2d 3.2c 3.2d 3.2e 3.2f	Generator Foundation Station Service Distribution Line - 1ph. Lightning Mast Foundations 70' Lightning Mast Foundation TATION FOUNDATIONS N STRUCTURES 345kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Instrument Transformer Stand Arrester Stand Wave Trap Stand Lightning Masts - 70' 230kV Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Stand alone Substation A-Frame Structures - Shared Column Switch Stands Station Service Transformer Stand Bus Support 3ph Bus Support 1 Ph Bus Support 1 Ph Bus Support 1 Ph	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA LS EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 16,000 \$	\$ - 10,458 \$ - 5\$ - 5\$ - 5\$ - 5\$ - 5\$ - 5\$ - 5\$	\$ 17,000 \$ 6,500 \$ 5,600 \$ - \$ - \$ - \$ 37,000 \$ 37,000 \$ 14,800 \$ 14,800 \$ 1,850 \$ 1,850 \$ 1,850 \$ 1,2025 \$ 12,025 \$ 12,025 \$ 1,295 \$ 1,295	\$ - 11,200 \$ - 11,200 \$ - 5 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ -	\$ 33,000 \$ 6,500 \$ 10,829 \$ - \$ - \$ 74,000 \$ 74,000 \$ 29,600 \$ 29,600 \$ 29,600 \$ 12,950 \$ 1,4800 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,950 \$ 12,	\$ - S - S - S - S - S - S - S - S - S -

Item	ltem Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	1	EA	\$ 18,500	\$ 18,500	\$ 18,500	\$ 18,500	\$ 37,000	\$ 37,000
3.3b	Substation A-Frame Structures - Shared Column	0	EA	\$ 18,500	\$ -			\$ 37,000	
3.3c	Switch Stands	1	EA	\$ 7,955	\$ 7,955			\$ 15,910	
3.3d 3.3e	Fuse Stand Bus Support 2nh	0	EA EA	\$ 7,955 \$ 3,330	\$ - \$ 3,330	\$ 7,955 \$ 3,330		\$ 15,910 \$ 6,660	
3.3f	Bus Support 3ph Bus Support 1 Ph	3		\$ 3,330	\$ 5,550			\$ 3,700	
3.3g	Instrument Transformer Stand	9	EA	\$ 740	\$ 6,660			\$ 1,480	
3.3h	Arrester Stand	3	EA	\$ 740	\$ 2,220			\$ 1,480	
3.3j	Wave Trap Stand	1		\$ 3,700	\$ 3,700			\$ 7,400	
3.3k	Lightning Mast	2	EA	\$ 6,475	\$ 12,950			\$ 12,950	
3.31	Station Service Transformer Support Stand TATION STRUCTURES	0	EA	\$ 1,110	\$ -	\$ 1,110	7	\$ 2,220	
4. MAJOR EQU					\$ 60,865		\$ 60,865		\$ 121,730
4. WAJOR EQU	345kV								
4.1a	Circuit Breakers	0	EA	\$ 200,000	\$ -	\$ 80,000	\$ -	\$ 280,000	\$ -
4.1b	Capacitor Banks	0		\$ -	\$ -	\$ 80,000		\$ 80,000	\$ -
4.1c	345 kV - 230 kV Auto Transformer	0	EA	\$ -	\$ -			\$ 750,000	
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000	\$ -
4.2 4.2a	230kV Circuit Breakers	0	EA	\$ 115,000	\$ -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2a 4.2b	Capacitor Banks	0	EA	\$ 115,000	\$ -	\$ 80,000 \$ 80,000		\$ 195,000	
4.25	capacitor banks		LA.	,	,	3 00,000	,	y 00,000	*
4.3	115kV								
4.3a	Circuit Breakers	1	EA	\$ 52,000	\$ 52,000		\$ 60,000		\$ 112,000
4.3b	Capacitor Banks	0	EA	\$ -	\$ -	\$ 60,000	\$ -	\$ 60,000	\$ -
TOTAL BAALO	DR EQUIPTMENT				ć 53,000		ć 50,000		ć 443.000
	IIPTMENT / MATERIALS				\$ 52,000		\$ 60,000		\$ 112,000
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	0	EA	\$ 40,000	\$ -	\$ 15,000	\$ -	\$ 55,000	\$ -
5.1b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 35,000	\$ -	\$ 17,500	\$ -	\$ 52,500	\$ -
l		0	- Cr \	7 33,000		, ,	7	9 52,500	
5.1c	VT'S	0	EA	\$ 25,000	\$ -	\$ 12,000	\$ -	\$ 37,000	
5.1d	CT'S	0	EA EA	\$ 25,000 \$ 13,000	\$ -	\$ 12,000 \$ 8,000	\$ -	\$ 37,000 \$ 21,000	\$ -
5.1d 5.1e	CT'S CCVT'S	0 0 0	EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000	\$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000	\$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000	\$ - \$ -
5.1d 5.1e 5.1f	CT'S CCVT'S Arresters	0 0 0	EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500	\$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500	\$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000	\$ - \$ - \$ -
5.1d 5.1e	CT'S CCVT'S	0 0 0	EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000	\$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000	\$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g	CT'S CCVT'S Arresters Wave Traps	0 0 0 0	EA EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000	\$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g 5.1h 5.1j	CT'S CCVT'S Arresters Wave Traps Station Service Transformers	0 0 0 0	EA EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000	\$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000	\$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000	\$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g 5.1h 5.1j	CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV	0 0 0 0 0 0	EA EA EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 6,500 \$ 200,000	\$ - \$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 8,000 \$ 50,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000	\$ - \$ - \$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g 5.1h 5.1j 5.2 5.2a	CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator	0 0 0 0 0 0	EA EA EA EA EA EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 50,000 \$ 50,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 50,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g 5.1h 5.1j	CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV	0 0 0 0 0 0	EA EA EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 6,500 \$ 200,000	\$ - \$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 50,000 \$ 15,000 \$ 15,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g 5.1h 5.1j 5.2 5.2a 5.2b	CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator	0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 13,000 \$ 200,000 \$ 35,000 \$ 35,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 50,000 \$ 50,000 \$ 15,000 \$ 50,000 \$ 50,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 21,000 \$ 250,000 \$ 250,000 \$ 47,500	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g 5.1h 5.1j 5.2 5.2a 5.2b 5.2c	CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 200,000 \$ 35,000 \$ 35,000 \$ 35,000 \$ 313,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 5,000 \$ 50,000 \$ 15,000 \$ 50,000 \$ 17,500 \$ 8,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 250,000 \$ 250,000 \$ 50,000 \$ 47,500 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g 5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2c 5.2d 5.2d 5.2e 5.2f	CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters	0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 200,000 \$ 30,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 5,000 \$ 5,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 50,000 \$ 50,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 250,000 \$ 250,000 \$ 250,000 \$ 250,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 11,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
5.1d 5.1e 5.1f 5.1g 5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2c 5.2d 5.2d 5.2d 5.2d	CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Wave Traps	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 200,000 \$ 35,000 \$ 35,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 1,500 \$ 150,000 \$ 150,000 \$ 15,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 6,000 \$ 6,000 \$ 8,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 250,000 \$ 250,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 11,000 \$ 11,000 \$ 21,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
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5.1d 5.1e 5.1f 5.1f 5.1g 5.1h 5.1j 5.2 5.2a 5.2b 5.2c 5.2c 5.2d 5.2e 5.2f 5.2g 5.2h 5.2j 5.3a 5.3a 5.3a 5.3a 5.3c 5.3d 5.3e 5.3d 5.3e	CT'S CCVT'S Arresters Wave Traps Station Service Transformers 230kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CCT'S CCVT'S Arresters Wave Traps Station Service Transformers 115kV Line Switches - 3ph w/ motor operator Disconnect Switches - 3ph w/ manual operator VT'S CT'S CCVT'S Arresters Vave Traps Station Service Transformers	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EA EA EA EA EA EA EA EA EA EA EA EA EA E	\$ 25,000 \$ 13,000 \$ 13,000 \$ 6,500 \$ 200,000 \$ 200,000 \$ 35,000 \$ 30,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000 \$ 13,000	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 12,000 \$ 8,000 \$ 8,000 \$ 1,500 \$ 15,000 \$ 17,500 \$ 17,500 \$ 8,000 \$ 8,000 \$ 6,000 \$ 17,500 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 8,000 \$ 9 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500 \$ 17,500	\$ - S - S - S - S - S - S - S - S - S -	\$ 37,000 \$ 21,000 \$ 21,000 \$ 8,000 \$ 250,000 \$ 250,000 \$ 47,500 \$ 21,000 \$ 21,000 \$ 21,000 \$ 11,000 \$ 11,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 21,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,000 \$ 3,	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -

Item	Item Description	Estimated Quantity	Unit of Measure	Material Su	pply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate		TOTAL
TOTAL SMALL	EQUIPTMENT / MATERIALS					\$ 186,260		\$ 130,500		\$	316,760
	DUSE / PANELS / GENERATOR					\$ 180,200		\$ 130,500		Ş	310,760
	CONTROL HOUSE	1	EA	\$	76,800	\$ 76,800	\$ 76,800	\$ 76,800	\$ 153,600	\$	153,600
6.2	Protection and Telecom Equipment Panels	3	EA	\$	35,000	\$ 105,000	\$ 10,000	\$ 30,000	\$ 45,000	\$	135,000
6.3	125VDC Batteries	0	EA	\$	75,000	\$ -	\$ 25,000	\$ -	\$ 100,000	\$	-
6.4	Control Cables	1	LS	\$	71,995	\$ 71,995	\$ 71,995	\$ 71,995	\$ 143,990	\$	143,990
6.5	SCADA and Communications	0	EA	\$	50,000	\$ -	\$ 100,000	\$ -	\$ 150,000	\$	-
6.6	Low Voltage AC Distribution	0	EA	\$	50,000	\$ -	\$ 100,000		\$ 150,000	\$	-
	DC Distribution System	0	EA	\$	50,000		\$ 100,000		\$ 150,000		-
6.8	Security	0	EA	\$	7,500	\$ -	\$ 7,500	\$ -	\$ 15,000	\$	-
6.9	Fire Alarm	0	EA	\$	7,500		\$ 7,500	\$ -	\$ 15,000		-
6.10	Generator	0	EA	\$	100,000	\$ -	\$ 80,000	\$ -	\$ 180,000	\$	-
	OL HOUSE / PANELS / GENERATOR					\$ 253,795		\$ 178,795		\$	432,590
7. MISC ITEMS											
7.1	Conduit & Cable Trench System	90.0	LF	\$	185.00	\$ 16,650	\$ 170.00	\$ 15,300	\$ 355	\$	31,950
7.2	Rigid Bus, Fittings & Insulators	240.0	LF	\$	125.07	\$ 30,017	\$ 237.10	\$ 56,904	\$ 362	\$	86,921
7.3	Strain Bus, Connectors & Insulators	0.0	LF	\$	39.30	\$ -	\$ 53.35	\$ -	\$ 93	\$	-
	Grounding System	1,100.0	LF	\$	6.93	\$ 7,623	\$ 32.58	\$ 35,838	\$ 40	\$	43,461
	Strain Bus Insulators - 345kV	0	EA	\$	2,000	\$ -	\$ 1,050	\$ -	\$ 3,050		-
	Strain Bus Insulators - 230kV	0	EA	\$	1,400	\$ -	\$ 750	\$ -	\$ 2,150		-
7.7	Strain Bus Insulators - 115kV	0	EA	\$	1,000	\$ -	\$ 550	\$ -	\$ 1,550	\$	-
	Low Voltage AC Station Service	0	LS	\$	50,000		\$ 75,000		\$ 125,000		-
	SSVT Service	0	LS	\$	45,000		\$ 45,000		\$ 90,000		-
	Control Conduits from Trench to Equipment	1	LS	\$,	\$ 62,500	\$ 62,500	\$ 62,500	\$ 125,000	\$	125,000
	Misc. Materials (Above and Below Ground)	1	LS	\$	90,000	\$ 90,000	\$ 180,000	\$ 180,000	\$ 270,000	\$	270,000
7.12											
7.13											
7.14											
7.15											
7.16											
7.17											
7.18											
7.19											
7.20 7.21											
7.22 7.23											
7.24											
7.25											
TOTAL - MISC I	TEMS					\$ 206,790		\$ 350,542		Ś	557,331
						\$ 940,692		\$ 1,036,727		Ś	1,977,418
	ntown Substation - Install					3 940,092		J,U30,727		Ÿ	1,5//,418
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization			ļ.,			46	46	40	_	
	Mob / Demob Project Management, Material Handling & Amenities	1	LS	\$	-	\$ -	\$ 19,774	\$ 19,774	\$ 19,774	\$	19,774
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 95,145	\$ 95,145	\$ 95,145	\$	95,145
8.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 19,774	\$ 19,774	\$ 19,774	\$	19,774
	Site Accommodation, Facilities, Storage	1	LS	\$	-	\$ -	\$ 19,774	\$ 19,774	\$ 19,774	\$	19,774
	Engineering										
	Design Engineering	1	LS	\$		\$ -	\$ 158,193	\$ 158,193	\$ 158,193		158,193
	LiDAR	-	Mile	\$		\$ -	\$ -	\$ -	\$ -	\$	-
	Geotech	4		\$		\$ -	\$ 3,500				14,000
	Surveying/Staking	1	Site	\$	-	\$ -	\$ 13,842	\$ 13,842	\$ 13,842	\$	13,842
	Testing & Commissioning										

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supp	ply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -	\$	-	\$ 49,435	\$ 49,435	\$ 49,435	\$ 49,435
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs		LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -	\$	-	\$ 5,932	\$ 5,932	\$ 5,932	\$ 5,932
8.13	Real Estate Costs (New)	1	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	1	LS	\$ -	\$	-	\$ 2,400	\$ 2,400	\$ 2,400	\$ 2,400
8.15	Legal Fees	-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)		LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 75,255	\$	75,255	\$ -	\$ -	\$ 75,255	\$ 75,255
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$	-	\$ 1,977	\$ 1,977	\$ 1,977	\$ 1,977
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$	75,255		\$ 400,249		\$ 475,504

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H. SS Churchtown-Install

ITC T032 (Segment B) J. Pleasant Valley Substation - Install

5		Total:	\$	3,855,941		
ITC T032	(Segment B)					
		Supply		Installation		Total
J. Pleasant Valley Substation - Install						
1. SITE PREP/ GRADING/ FENCING / CIVIL	\$	11,025	\$	14,625	\$	25,650
2. SUBSTATION FOUNDATIONS	\$	151,466	\$	160,900	\$	312,366
3. SUBSTATION STRUCTURES	\$	44,400	\$	44,400	\$	88,800
4. MAJOR EQUIPTMENT	\$	200,000	\$	80,000	\$	280,000
5. SMALL EQUIPTMENT / MATERIALS	\$	260,500	\$	129,000	\$	389,500
6. CONTROL HOUSE / PANELS	\$	560,900	\$	253,400	\$	814,300
7. MISC ITEMS	\$	594,450	\$	596,075	\$	1,190,525
8. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	145,819	\$	608,981	\$	754,800
CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$	-
SUBTOTAL:	\$	1,968,560	\$	1,887,381	\$	3,855,941
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$	-
TOTAL	ć	1 069 560	ė	1 007 201	ė	2 OFF 0/1

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Estimate Revision:

Item	Item Description	Estimated Quantity	Unit of Measure	Materia	al Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
J. Pleasa	nt Valley Substation - Install									
1. SITE PREP/	GRADING/ FENCING / CIVIL									
1.1	Site Works including clearing, sediment controls, rough grading, and final grading.	0	ACRES	\$	-	\$ -	\$ 230,000	\$ -	\$ 230,000	\$ -
1.2	Station stone within substation fence.	75	CY	\$	27	\$ 2,025	\$ 75	\$ 5,625	\$ 102	\$ 7,650
1.3	Substation Fence	90	LF	\$	100	\$ 9,000	\$ 100	\$ 9,000	\$ 200	\$ 18,000
1.4	Permanent Access Road - 20'-Wide	0	LF	\$	35	\$ -	\$ 285	\$ -	\$ 320	\$ -
1.5										
1.6										
1.7										
1.8										
1.9										
1.10										
1.11										
1.12										
1.13										
1.14										
1.15										
TOTAL - SITE P	REP/ GRADING/ FENCING / CIVIL					\$ 11,025		\$ 14,625		\$ 25,650
2. SUBSTATIO	N FOUNDATIONS									
2.1	345kV									
2.1a	Circuit Breaker Foundations	1	EA	\$	14,940	\$ 14,940	\$ 16,000	\$ 16,000	\$ 30,940	\$ 30,940
2.1b	Capacitor Bank Foundations	0	EA	\$	56,025	\$ -	\$ 60,000	\$ -	\$ 116,025	\$ -
2.1c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	26,145	\$ -	\$ 28,000	\$ -	\$ 54,145	\$ -
2.1e	Switch Stand Foundations	6	EA	\$	4,482	\$ 26,892	\$ 4,800	\$ 28,800	\$ 9,282	\$ 55,692
2.1f	Station Service Transformer Stand Foundation	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1g	Bus Support 3ph Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1h	Bus Support 1 Ph Foundations	0	EA	\$	4,482	\$ -	\$ 4,800	\$ -	\$ 9,282	\$ -
2.1j	Instrument Transformer Stand Foundations	9	EA	\$	4,482	\$ 40,338	\$ 4,800	\$ 43,200	\$ 9,282	\$ 83,538
2.1k	Arrester Stand Foundations	3	EA	\$	4,482	\$ 13,446	\$ 4,800	\$ 14,400	\$ 9,282	
2.1m	Wave Trap Stand Foundations	1	EA	\$	4,482	\$ 4,482	\$ 4,800	\$ 4,800	\$ 9,282	\$ 9,282
2.1n	Misc. Structure Foundations	0	EA	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -
2.1p										
2.2	230kV									
2.2a	Circuit Breaker Foundations	0	EA	\$	11,952	\$ -	\$ 12,800	\$ -	\$ 24,752	\$ -
2.2b	Capacitor Bank Foundations	0	EA	\$	44,820		\$ 48,000		\$ 92,820	
2.2c	Caisson DE Foundations (for DE A frame str stand alone)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
2.2d	Caisson DE Foundations (for DE A frame str shared column)	0	EA	\$	22,410	\$ -	\$ 24,000	\$ -	\$ 46,410	\$ -
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3.10 Substation AFrame Structures - Stand alone	Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
27 28 18 19 18 19 18 18 18 1	2.2e	Switch Stand Foundations	0	EA	\$ 3,735	\$ -	\$ 4,000	\$ -	\$ 7,735	\$ -
2 29 Bis Support 1 PF Francisco 2 5 5 2378 5		Station Service Transformer Stand Foundation			,	·	, , , , , , , , , , , , , , , , , , , ,			
2.5 Secretor Envelopment Series Confidences 0 16 3 3.75 3		** *			·					•
2.72 Windows Processings 0 14. 5 1.77 5 5 5 5 5 7.70 5 7.70 5 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70						т				
2.27 New Time Stand Foundations S SA S X,70 S S A,000 S S X,70 S S S S S S S S S						Ψ	, , , , , , , , , , , , , , , , , , , ,			
3.75 3.85W										
2-30									, , , , , , , , , , , , , , , , , , , ,	
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2.5 a Control House Addition Foundation (25-ft x 50-ft)										
2.5 b Generator Foundation 0 EA \$ 16,000 \$ - \$ 17,000 \$ - \$ 33,000 \$ - \$ 2.6 Lightning Mast Foundation 0 EA \$ 5.229 \$ - \$ 5.600 \$ - \$ 10,829 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ - \$ 2.60 \$ 2.60 \$ - \$ 2.60 \$ 2.60 \$ - \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$ 2.60 \$	2.5	Control House Foundations / Pad								
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3.2a Substation A-Frame Structures - Stand alone 0 EA \$ 33,300 \$ - \$ 33,300 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ - \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$ 66,600 \$	3.2	230kV								
3.2b Substation A-Frame Structures - Shared Column 0 EA \$ 33,300 \$ - \$ 66,600 \$ - 3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 24,050 \$ - 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 24,050 \$ - 3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -		Substation A-Frame Structures - Stand alone	0	EA	\$ 33,300	\$ -	\$ 33,300	\$ -	\$ 66,600	\$ -
3.2c Switch Stands 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ - 3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ - 3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>\$ -</td><td></td><td></td></t<>								\$ -		
3.2d Station Service Transformer Stand 0 EA \$ 12,025 \$ - \$ 12,025 \$ - \$ 24,050 \$ - 3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - 3.2f Bus Support 1 Ph 0 EA \$ 2,775 \$ - \$ 2,775 \$ - \$ 2,775 \$ - \$ 5,550 \$ -										
3.2e Bus Support 3ph 0 EA \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 5,550 \$ -										
3.2f Bus Support 1 Ph 0 EA \$ 2,775 \$ - \$ 2,775 \$ - \$ 5,550 \$ -										
		** *								
		Instrument Transformer Stand	0							

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate		Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
3.2h	Arrester Stand	0	EA	\$ 1,295		\$ 1,295	\$ -	\$ 2,590	\$ -
3.2j	Wave Trap Stand	0	EA	\$ 5,550		\$ 5,550	\$ -		\$ -
3.2k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
3.3	115kV								
3.3a	Substation A-Frame Structures - Stand alone	0	EA	\$ 18,500		\$ 18,500	\$ -		\$ -
3.3b	Substation A-Frame Structures - Shared Column	0		\$ 18,500		\$ 18,500			\$ -
3.3c	Switch Stands	0	EA	\$ 7,955		\$ 7,955		\$ 15,910	
3.3d	Fuse Stand	0	EA	\$ 7,955					\$ -
3.3e	Bus Support 3ph	0	EA	\$ 3,330			\$ -		\$ -
3.3f	Bus Support 1 Ph	0	EA	\$ 1,850			\$ -		\$ -
3.3g	Instrument Transformer Stand	0	EA	\$ 740		\$ 740	\$ -	, , , , ,	\$ -
3.3h	Arrester Stand	0	EA	\$ 740		\$ 740	\$ -	, ,	\$ -
3.3j	Wave Trap Stand	0	EA	\$ 3,700		\$ 3,700			\$ -
3.3k	Misc. Structures	0	EA	\$ 6,475	\$ -	\$ 6,475	\$ -	\$ 12,950	\$ -
TOTAL CURC	ATION STRUCTURES				ć 44.400		ć 44.400		ć 00.000
					\$ 44,400		\$ 44,400		\$ 88,800
4. MAJOR EQU									
4.1 4.1a	345kV Circuit Breakers	1	EA	\$ 200,000	\$ 200,000	\$ 80,000	\$ 80,000	\$ 280,000	\$ 280,000
4.1a 4.1b	Capacitor Banks - W/ Center Tap VT and Reactors	0	EA	\$ 200,000		\$ 80,000			
4.1c	Circuit Breakers - Cap Switching	0	EA	\$ 370,000		\$ 750,000	\$ - \$ -		\$ - \$ -
4.1d	345 kV - 115 kV Auto Transformer	0	EA	\$ 220,000	\$ -	\$ 750,000		. , ,	\$ -
4.10	230kV	U	EA	ş <u>-</u>	· -	\$ 730,000	, -	3 730,000	, -
4.2a	Circuit Breakers	0	EA	\$ 115,000	s -	\$ 80,000	\$ -	\$ 195,000	\$ -
4.2b	Capacitor Banks	0	EA	\$ 113,000	\$ -	\$ 80,000	\$ -		\$ -
4.20	Capacitor banks	0	LA	-	7	3 80,000	· -	3 80,000	-
4.3	115kV								
4.3a	Circuit Breakers	0	EA	\$ 52,000	s -	\$ 60,000	\$ -	\$ 112,000	\$ -
4.3b	Capacitor Banks	0	EA	\$ 32,000	\$ -	\$ 60,000	\$ -		\$ -
	Capacitor Burino	·		Ť	Ť	ψ 00,000	Ÿ	ψ σσ,σσσ	<u> </u>
TOTAL - MAJO	R EQUIPTMENT				\$ 200,000		\$ 80,000		\$ 280,000
	PTMENT / MATERIALS						,		
5.1	345kV								
5.1a	Line Switches - 3ph w/ motor operator	1	EA	\$ 40,000	\$ 40,000	\$ 15,000	\$ 15,000	\$ 55,000	\$ 55,000
5.1b	Disconnect Switches - 3ph w/ manual operator	1	EA	\$ 35,000	\$ 35,000	\$ 17,500	\$ 17,500	\$ 52,500	\$ 52,500
5.1c	VT'S	3	EA	\$ 25,000	\$ 75,000	\$ 12,000	\$ 36,000	\$ 37,000	\$ 111,000
5.1d	CT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1e	CCVT'S	3	EA	\$ 13,000	\$ 39,000	\$ 8,000	\$ 24,000	\$ 21,000	\$ 63,000
5.1f	Arresters	3	EA	\$ 6,500	\$ 19,500	\$ 1,500	\$ 4,500	\$ 8,000	\$ 24,000
5.1g	Wave Traps	1	EA	\$ 13,000	\$ 13,000	\$ 8,000	\$ 8,000	\$ 21,000	\$ 21,000
5.1h	Station Service Transformers	0	EA	\$ 200,000	\$ -	\$ 50,000	\$ -	\$ 250,000	\$ -
5.1j									
5.2	230kV								
5.2a	Line Switches - 3ph w/ motor operator	0	EA	\$ 35,000		\$ 15,000	\$ -	\$ 50,000	
5.2b	Disconnect Switches - 3ph w/ manual operator	0	EA	\$ 30,000			\$ -		\$ -
5.2c	VT'S	0	EA	\$ 13,000	+	\$ 8,000			\$ -
5.2d	CT'S	0	EA	\$ 13,000	<u> </u>	\$ 8,000	•	\$ 21,000	•
5.2e	CCVT'S	0	EA	\$ 10,000					\$ -
5.2f	Arresters	0	EA	\$ 5,000		,	\$ -	\$ 11,000	•
5.2g	Wave Traps	0	EA	\$ 13,000		\$ 8,000	\$ -		\$ -
5.2h	Station Service Transformers	0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2j					-				
5.3	115kV		FA.	ć 22.000	6	ć 45.000	ć	ć 40.000	^
5.3a	Line Switches - 3ph w/ motor operator	0		\$ 33,000		\$ 15,000		\$ 48,000	
5.3b	Disconnect Switches - 3ph w/ manual operator	0		\$ 28,000		\$ 17,500		\$ 45,500	
5.3c	VT'S	0		\$ 13,000 \$ 13,000		\$ 8,000		\$ 21,000	
5.3d	CT'S	0				\$ 8,000		\$ 21,000	
5.3e	CCVT'S Arrectors	0		\$ 8,000		\$ 8,000 \$ 6,000		\$ 16,000	
5.3f 5.3g	Arresters Wave Traps	0	EA EA	\$ 3,420	\$ -	,	\$ - \$ -	\$ 9,420 \$ -	\$ - \$ -
	Station Service Transformers	0		\$ -		\$ -			\$ -
5.3h									

TOTAL - SMALL E	uses			Material Supply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate	TOTAL
6. CONTROL HOL		0	EA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6. CONTROL HOL	EQUIPTMENT / MATERIALS				\$ 260,500		\$ 129,000		\$ 389,500
	USE / PANELS / GENERATOR				\$ 200,300		3 129,000		\$ 389,300
6.1 C	· · · ·								
	CONTROL HOUSE Addition (25-ft x 50-ft)	1	EA	\$ 325,000	\$ 325,000	\$ 85,000	\$ 85,000	\$ 410,000	\$ 410,000
	Protection and Telecom Equipment Panels	3	EA	\$ 35,000	\$ 105,000	·		·	
	L25VDC Batteries	0	EA	\$ 75,000	\$ -	,		\$ 100,000	
	Control Cables	1	LS	\$ 130,900	\$ 130,900			\$ 261,800	
	GCADA and Communications	0	EA	\$ -	\$ - \$ -	\$ -	\$ -	\$ -	\$ -
	.ow Voltage AC Distribution	0	EA	\$ 50,000	T .	\$ 100,000	\$ -	\$ 150,000	
	DC Distribution System	0	EA EA	\$ 50,000 \$ 7,500	\$ -	\$ 100,000 \$ 7,500		\$ 150,000 \$ 15,000	
	Security Fire Alarm	0	EA	\$ 7,500	\$ - \$ -			\$ 15,000	
	Generator	0	EA	\$ 100,000	\$ -			\$ 180,000	
6.10	Seriel ator	0	EA	\$ 100,000		\$ 80,000	ş -	\$ 180,000	-
TOTAL - CONTRO	OL HOUSE / PANELS / GENERATOR				\$ 560,900		\$ 253,400		\$ 814,300
7. MISC ITEMS									
	Conduit & Cable Trench System	800	LF	\$ 185.00	\$ 148,000	\$ 170.00	\$ 136,000	\$ 355	\$ 284,000
7.2 R	Rigid Bus, Fittings & Insulators	0	LF	\$ 125.07	\$ -	\$ 237.10	\$ -	\$ 362	\$ -
7.3 St	Strain Bus, Connectors & Insulators	2,500	LF	\$ 13.38	\$ 33,450	\$ 39.35	\$ 98,375	\$ 53	\$ 131,825
7.4 G	Grounding System	0	LF	\$ 6.93	\$ -	\$ 32.58	\$ -	\$ 40	\$ -
7.5 St	Strain Bus Insulators - 345kV	54	EA	\$ 2,000	\$ 108,000	\$ 1,050	\$ 56,700	\$ 3,050	\$ 164,700
	Strain Bus Insulators - 230kV	0	EA	\$ 1,400	\$ -	\$ 750		\$ 2,150	
	Strain Bus Insulators - 115kV	0	EA	\$ 1,000	\$ -			\$ 1,550	
	ow Voltage AC Station Service	0	LS	\$ 50,000	\$ -	\$ 75,000		\$ 125,000	
	SSVT Service	0	LS	\$ 45,000	\$ -	\$ 45,000		\$ 90,000	
	Control Conduits from Trench to Equipment	1	LS	\$ 125,000	\$ 125,000		\$ 125,000	\$ 250,000	
	Misc. Materials (Above and Below Ground)	1	LS	\$ 180,000	\$ 180,000		\$ 180,000	\$ 360,000	
7.12	·								
7.13									
7.14									
7.15									
7.16									
7.17									
7.18									
7.19									
7.20									
7.21									
7.22									<u> </u>
7.23							-		
7.24									
7.25	FFAC				4 50:		4 505		4 465
TOTAL - MISC ITI					\$ 594,450		\$ 596,075		\$ 1,190,525
J. Pleasan	t Valley Substation - Install				\$ 1,822,741		\$ 1,278,400		\$ 3,101,141
	B, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:								
	Contractor Mobilization / Demobilization								
8.1 N	Mob / Demob	1	LS	\$ -	\$ -	\$ 31,011	\$ 31,011	\$ 31,011	\$ 31,011
	Project Management, Material Handling & Amenities								
8.2 Pi	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 149,215	\$ 149,215	\$ 149,215	\$ 149,215
8.3 U	Jtility PM and Project Oversite	1	LS		\$ -	\$ 31,011	\$ 31,011	\$ 31,011	\$ 31,011
	otility PM and Project Oversite Site Accommodation, Facilities, Storage	1		\$ -	\$ -				
	Engineering	1	L)	-	-	2 31,011	7 31,011	7 31,011	7 31,011
	Design Engineering Design Engineering	1	LS	\$ -	\$ -	\$ 248,091	\$ 248,091	\$ 248,091	\$ 248,091
	iDAR	-	Mile	\$ -	\$ -	\$ 246,091	\$ 248,091	\$ 248,091	\$ 248,091
	Geotech	2	EA	\$ -		\$ 3,500			
	Surveying/Staking	1		\$ -	\$ -				

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Testing & Commissioning									
8.9	Testing & Commissioning of T-Line and Equipment	1	LS	\$ -		\$ -	\$ 77,529	\$ 77,529	\$ 77,529	\$ 77,529
	Permitting and Additional Costs									
8.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	. \$	\$ -	\$ -	\$ -	\$ -	\$ -
8.11	Environmental Mitigation		LS	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -
8.12	Warranties / LOC's	1	LS	\$ -		\$ -	\$ 9,303	\$ 9,303	\$ 9,303	\$ 9,303
8.13	Real Estate Costs (New)	1	LS	\$ -	. \$	\$ -	\$ -	\$ -	\$ -	\$ -
8.14	Real Estate Costs (Incumbent Utility)	-	LS	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -
8.15	Legal Fees	-	LS	\$ -	. \$	\$ -	\$ -	\$ -	\$ -	\$ -
8.16	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	. Ş	\$ -	\$ -	\$ -	\$ -	\$ -
8.17		-	LS	\$ -	. 5	\$ -	\$ -	\$ -	\$ -	\$ -
8.18	Sales Tax on Materials	1	LS	\$ 145,83	19 \$	\$ 145,819	\$ -	\$ -	\$ 145,819	\$ 145,819
8.19	Fees for permits, including roadway, railroad, building or other local permits	1	LS		Ç	\$ -	\$ 3,101	\$ 3,101	\$ 3,101	\$ 3,101
TOTAL - MOB	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				Ş	\$ 145,819		\$ 608,981		\$ 754,800

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J. SS Pleasant Valley-Install

ITC T032 (Segment B) K. Interconnection Knickerbocker Station

ITC T032 (Segment B)			
		Supply	Installation	Total
K. Interconnection Knickerbocker Station				
1. CLEARING & ACCESS	\$	-	\$ 436,850	\$ 4
2. FOUNDATIONS	\$	756,457	\$ 764,558	\$ 1,5
3. STRUCTURES	\$	556,300	\$ 370,424	\$ 9
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$
5. INSULATORS, FITTINGS, HARDWARE	\$	128,000	\$ 55,640	\$ 1
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	115,261	\$ 439,544	\$ 5
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$
SUBTOTAL:	\$	1,556,017	\$ 2,067,017	\$ 3,6
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$
TOTAL:	\$	1,556,017	\$ 2,067,017	\$ 3,6

Description	OI WOIK.									
Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	te N	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
K. Inter	connection Knickerbocker Station									
1. CLEARING	& ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$	-	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$ -	\$		\$ 5,000		, ,,,,,,	\$ 10,000
1.3	Access Road	-	LF	\$ -	\$	-	\$ 45		\$ 45	
1.4	Silt Fence	3,500.0	LF	\$ -	\$	-	\$ 4	,		, ,
1.5	Matting - Access and ROW	3,500.0	LF	\$ -	\$	-	\$ 70		\$ 70	
1.6	Matting - To Work Area	525.0	LF	\$ -	\$	-	\$ 70			\$ 36,750
1.7	Snow Removal	-	LS	\$ -	\$	-	\$ 516,800			\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$	-	\$ 10,000			\$ 5,000
1.9	Work Pads	35,000.0	SF	\$ -	_ T		\$ 4			\$ 123,200
1.10	Restoration for Work Pad areas	7,000.0	SF	\$ -	\$	-	\$ 0.2	\$ 1,050		. ,
1.11	Temporary Access Bridge	-	EA	\$ -	_ T		\$ 20,035	\$ -		\$ -
1.12	Air Bridge	-	EA	\$ -	7		\$ 14,445	\$ -		\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	, Y		\$ 4,580	\$ -		\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -		-	\$ 4,130	\$ -		\$ -
1.15	Gates	-	EA	\$ 2,0		-	\$ 2,500	\$ -		\$ -
1.16	Culverts / Misc. Access	-	EA		50 \$	-	\$ 1,250		, ,,,,,	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$	-	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$	-		\$ -		\$ -
1.19					\$			\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27 \$		\$ 75		\$ 102	\$ -
	RING & ACCESS				\$	-		\$ 436,850		\$ 436,850
2. FOUNDATI										
2.1	Drilled Pier - 115kV Single Circuit H- Pole Tangent	2	EA	\$ 64,6		129,270				\$ 259,924
2.2	Drilled Pier - 115kV Single Circuit Single Pole Angle/DE	1	EA	\$ 76,4		76,484	\$ 77,303	\$ 77,303		\$ 153,787
2.3	Drilled Pier - 345kV Single Circuit H-Pole Angle /DE	4	EA	\$ 137,6	76 \$	550,703	\$ 139,150	\$ 556,601	\$ 276,826	\$ 1,107,304
2.4										
2.5	Rock Excavation Adder	-	СУ	\$ -	\$	-	\$ 2,000	\$ -	\$ 2,000	\$ -
2.6					\$	-		\$ -		\$ -
2.7					\$	-		\$ -		\$ -
2.8					\$	-		\$ -		\$ -
2.9					\$	-		\$ -		\$ -
2.10					\$	-		\$ -		\$ -
2.11					\$	-		\$ -		\$ -
2.12					\$	-		\$ -		\$ -
2.13					\$	-		\$ -		\$ -
2.14					\$	-	·	\$ -		\$ -

Total: \$ 3,623,034

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Estimate Revision:

							Labor & Equipment	Labor & Equipment			
Item	Item Description	Estimated Quantity	Unit of Measure	Material Sup	ply Rate	Material Supply Cost	Supply Rate	Cost	Total Unit Rate		TOTAL
2.15						\$ -		\$ -		\$	
TOTAL - FOUN	NDATIONS					\$ 756,457		\$ 764,558		\$	1,521,015
3. STRUCTURI											
3.1	115kV Single Circuit Single Pole Angle/DE	1	Structure	\$	55,315					_	88,504
3.2	115kV Single Circuit Single Pole Tangent	2		\$, -	\$ 78,521	\$ 23,556		\$ 62,817	\$	125,634
3.3	345kV Single Circuit Single Pole Angle /DE	4	Structure	\$		\$ 418,921	\$ 62,838	\$ 251,353	\$ 167,569		670,274
3.4	Install Crounding and Crounding Assessaries	7	Christian	\$		\$ - \$ 3,542	ć F.F30	\$ -	\$ 6,045	\$	42,312
3.6	Install Grounding and Grounding Accessories	/	Structure	,		\$ 3,342	\$ 5,539	\$ 38,770	\$ 6,045	\$	42,312
3.7				+	_	\$ -		\$ -		\$	
3.8						\$ -		\$ -		\$	-
3.9						\$ -		\$ -		\$	-
3.10						\$ -		\$ -		\$	-
3.11						\$ -		\$ -		\$	-
3.12						\$ -		\$ -		\$	-
3.13						\$ -		\$ -		\$	-
3.14						\$ -		\$ -		\$	-
3.15	CTUDES					\$ -		\$ -		\$	026 724
TOTAL - STRU	DR, SHIELDWIRE, OPGW					\$ 556,300		\$ 370,424		\$	926,724
4.1	345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	-	LF	Ś	1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$	
4.1	(1) OPGW 36 Fiber AC-33/38/571	-	LF	Ś	1.35		\$ 5.00		\$ 6.35		
4.3	(1) 3/8" EHS7 Steel	-	LF	Ś		\$ -	\$ 5.00		\$ 5.47		-
4.5	Remove Existing 115kV Cable From Existing Structures	-	Mile	Š		\$ -	\$ 30,000		\$ 30,000.00		-
4.6	Remove Existing OPGW Cable	-	Mile	\$		\$ -	\$ 12,000		\$ 12,000.00		-
4.7	Remove Existing EH7	-	Mile	\$	-	\$ -	\$ 12,000	\$ -	\$ 12,000.00	\$	-
4.8	115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$	1.90	\$ -	\$ 5.00	\$ -	\$ 6.90	\$	-
4.9		-								ш.	
4.10	Rider Poles - Relocated	-	Set	\$		\$ -	\$ 3,500		\$ 3,500.00	\$	-
4.11	Rider Poles	-	EA	\$	1,750	\$ -	\$ 3,500		\$ 5,250.00	\$	-
	PUCTOR, SHIELDWIRE, OPGW: R, FITTINGS, HARDWARE					\$ -		\$ -		\$	-
5.1 SOLATOR	345kV Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$	1,800	\$ -	\$ 720	\$ -	\$ 2,520	Ċ	_
5.2	115kV Tangent (1-Group of 9-Bells Each Assembly)	12	Assembly	Š		\$ 10,800	\$ 560				17,520
5.3	345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	60	Assembly	\$		\$ 108,000	\$ 720				151,200
5.4	115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	7	Assembly	\$	900						10,220
5.5			Assembly			\$ -			\$ -	\$	-
5.6	OPGW Assembly - Tangent	2	Assembly	\$	200	\$ 400	\$ 150	\$ 300	\$ 350	\$	700
5.7	OPGW Assembly - Angle / DE	10	Assembly	\$		\$ 2,500	\$ 150		\$ 400	\$	4,000
5.8	OHSW Assembly - Tangent	-	Assembly	\$	200		\$ 150		\$ 350		-
5.9	OHSW Assembly - Angle / DE	-	Assembly	\$	250		\$ 150		\$ 400		-
5.10	OPGW Splice Boxes	-	Set	\$	1,750		\$ 1,746		\$ 3,496		-
5.11	OPGW Splice & Test	-	EA	\$	1,400 50		\$ 2,520 \$ 35		\$ 3,920		-
5.12 5.13	Spacer - Conductor Vibration Dampers - Conductor	-	EA EA	\$	35		\$ 35 \$ 35		\$ 85 \$ 70		
5.13	Shieldwire / OPGW Dampers, Misc. Fittings	-	EA	\$	27		\$ 35		\$ 62		
5.15	Guys, Anchors, and Accessories	-	EA	\$	720		\$ 885		\$ 1,605		-
5.16	Misc. materials (Signs and Markers)	-	Mile	\$	770		\$ 1,006		\$ 1,776		-
5.17											
5.18											
5.19										\vdash	
5.20										_	
	LATOR, FITTINGS, HARDWARE					\$ 128,000		\$ 55,640		\$	183,640
K. Interd	connection Knickerbocker Station					\$ 1,440,757		\$ 1,627,472		\$	3,068,229
6. MOB/DEM	OB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:										
	Contractor Mobilization / Demobilization										
	Mob / Demob	1	LS	\$	-	\$ -	\$ 30,682	\$ 30,682	\$ 30,682	\$	30,682
6.1		1		1						—	
6.1	Project Management, Material Handling & Amenities						ı				
								ا ا	أيبين أ	١,	
6.1	Project Management, Material Handling & Amenities Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 147,631	\$ 147,631	\$ 147,631	\$	147,631
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	_				ė					
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and	1 1 1	LS LS LS	\$		\$ - \$ -	\$ 147,631 \$ 30,682 \$ 30,682	\$ 30,682	\$ 30,682	\$	30,682 30,682

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 153,411	\$ 153,411	\$ 153,411	\$ 153,411
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 9,205	\$ 9,205	\$ 9,205	\$ 9,205
6.7	Geotech	1.0	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 21,478	\$ 21,478	\$ 21,478	\$ 21,478
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment		LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 9,205	\$ 9,205	\$ 9,205	\$ 9,205
6.13	Real Estate Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$ 115,261	\$ 115,261	\$ -	\$ -	\$ 115,261	\$ 115,261
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 3,068	\$ 3,068	\$ 3,068	\$ 3,068
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 115,261		\$ 439,544		\$ 554,805

ITC T032 (Segment B) L. Interconnection Churchtown Station

Estimate	E		Total:	ċ	2,404,297	
Revision:	3		i otai.	٦	2,404,237	
	ITC T032 (Se	egment B)				
			Supply		Installation	Total
1	L. Interconnection Churchtown Station					
	1. CLEARING & ACCESS	\$	-	\$	436,850	\$ 436,850
	2. FOUNDATIONS	\$	212,820	\$	669,100	\$ 881,920
	3. STRUCTURES	\$	318,188	\$	353,416	\$ 671,604
	4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$	-	\$ -
	5. INSULATORS, FITTINGS, HARDWARE	\$	44,000	\$	27,410	\$ 71,410
	6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	46,001	\$	296,512	\$ 342,513
	CONTRACTOR MARK-UP (OH&P)	\$	-	\$	-	\$ -
	SUBTOTAL:	\$	621,009	\$	1,783,288	\$ 2,404,297
	CONTINGENCY ON ENTIRE PROJECT	\$	-	\$	-	\$ -
	TOTAL:	\$	621,009	\$	1,783,288	\$ 2,404,297
Description	of Work:					

Item	ltem Description	Estimated Quantity	Unit of Measure	Mate	rial Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
L. Interc	onnection Churchtown Station									
1. CLEARING 8	ACCESS									
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$	-	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	2.0	Acre	\$	-	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 10,000
1.3	Access Road	-	LF	\$	-	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	3,500.0	LF	\$	-	\$ -	\$ 4	\$ 14,000	\$ 4	\$ 14,000
1.5	Matting - Access and ROW	3,500.0	LF	\$	-	\$ -	\$ 70	\$ 245,000	\$ 70	\$ 245,000
1.6	Matting - To Work Area	525.0	LF	\$	-	\$ -	\$ 70	\$ 36,750		\$ 36,750
1.7	Snow Removal	-	LS	\$	-	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$	-	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	35,000.0	SF	\$	-	\$ -	\$ 4	\$ 123,200	\$ 4	\$ 123,200
1.10	Restoration for Work Pad areas	7,000.0	SF	\$	-	\$ -	\$ 0.2	\$ 1,050	\$ 0	\$ 1,050
1.11	Temporary Access Bridge	-	EA	\$	-	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$	-	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$	-	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$	-	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$,	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$	750		\$ 1,250		\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$	-	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18						\$ -		\$ -		\$ -
1.19						\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$	27		\$ 75	\$ -	\$ 102	\$ -
	RING & ACCESS					\$ -		\$ 436,850		\$ 436,850
2. FOUNDATIO	ONS									
2.1	Drilled Pier - 115kV Single Circuit H- Pole Angle/ DE	2	EA	\$	30,403	\$ 60,806	\$ 30,729	\$ 61,457	\$ 61,131	\$ 122,263
2.2	Drilled Pier - 115kV Single Circuit H- Pole Tangent	3	EA	\$	30,403	\$ 91,209	\$ 30,729	\$ 92,186	\$ 61,131	\$ 183,394
2.3	Drilled Pier - 115kV Single Circuit Single Pole Angle/ DE	2	EA	\$	30,403	\$ 60,806	\$ 30,729	\$ 61,457	\$ 61,131	\$ 122,263
2.4										
2.5	Rock Excavation Adder	227	CY	\$	-	\$ -	\$ 2,000	\$ 454,000	\$ 2,000	\$ 454,000
2.6						\$ -		\$ -		\$ -
2.7						\$ -		\$ -		\$ -
2.8						\$ -		\$ -		\$ -

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Estimate

3.2 115kV Sin, 3.3 3.4 3.5 Install Gro 3.6 3.7 3.8 3.9 3.10 3.11 3.12 3.13 3.14 3.15 TOTAL - STRUCTURES 4. CONDUCTOR, SHIELDV 4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 1) Rider Pole 4.11 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Det 5.4 115kV Det 5.5 OPGW Ast 5.7 OPGW Ast	DWIRE, OPGW (1) 954kcmil 54/7 ACSS "Cardinal" 1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel	7	Structure Structure Structure	\$ 49,2 \$ 39,2 \$ 5		3,542 - - - - - - - - - -	\$ 49,216 \$ 39,261 \$ 5,539	\$ - \$ 38,770 \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$	\$ 98,432 \$ 78,521 \$ 6,045	\$ - 42,312 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 5 \$ - 7
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CONDUCTOR, SHIELDV 4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Det 5.4 115kV Ter 5.3 345kV Det 5.5 OPGW Ast 5.6 OPGW Ast 5.7 OPGW Ast	DWIRE, OPGW (1) 954kcmil 54/7 ACSS "Cardinal" 1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel	7	Structure Structure	\$ 39,2	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		\$ 49,216 \$ 39,261 \$ 5,539	\$ - \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - 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3.10 3.11 3.12 3.13 3.14 3.15 TOTAL - STRUCTURES 4. CONDUCTOR, SHIELDV 4.1 345kV - (1 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Reer 4.8 115kV - (1 4.9 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Dec 5.4 115kV Dec 5.5 6 OPGW Ass 5.7 OPGW Ass	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel				\$ \$ \$ \$ \$			\$ - \$ - \$ - \$ - \$ -		\$ - \$ - \$ - \$ - \$ -
3.11 3.12 3.13 3.14 3.15 TOTAL - STRUCTURES 4. CONDUCTOR, SHIELDW 4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole 5.1 NSULATOR, FITTINGS, SI 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV De; 5.4 115kV De; 5.5 5.6 OPGW As; 5.7 OPGW As;	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel				\$ \$ \$ \$ \$			\$ - \$ - \$ - \$ -		\$ - \$ - \$ - \$ -
3.12 3.13 3.14 3.15 TOTAL - STRUCTURES 4. CONDUCTOR, SHIELDV 4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rei 4.7 Ref 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Dei 5.4 115kV Dei 5.5 5.6 OPGW Asi 5.7 OPGW Asi	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel				\$ \$ \$ \$	- - - -		\$ - \$ - \$ -		\$ - \$ - \$ -
3.13 3.14 3.15 TOTAL - STRUCTURES 4. CONDUCTOR, SHIELDV 4.1 345KV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 A.10 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Dec 5.4 115kV Dec 5.5 6 OPGW Ass 5.7 OPGW Ass	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel				\$ \$	-		\$ - \$ -		\$ - \$ -
3.14 3.15 TOTAL - STRUCTURES 4. CONDUCTOR, SHIELDV 4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Reer 4.8 115kV - (1 4.9 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Dec 5.4 115kV Dec 5.5 6 OPGW Ass 5.7 OPGW Ass	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel				\$	-		\$ -		\$ -
3.15 TOTAL - STRUCTURES 4. CONDUCTOR, SHIELDY 4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Ret 4.7 Ret 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Det 5.4 115kV Det 5.5.6 OPGW Ast 5.7 OPGW Ast	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel				\$	-				
4. CONDUCTOR, SHIELDW 4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Tar 5.4 115kV Der 5.5 GPGW As 5.7 OPGW As	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel				<u> </u>	-				\$ -
4. CONDUCTOR, SHIELDY 4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole 4.11 Rider Pole 5. INSULATOR, FITTINGS, 5. INSULATOR, FITTINGS, 5. 3 345kV Tar 5.2 115kV Tar 5.3 345kV Dei 5.4 115kV Dei 5.5 OPGW Asi 5.7 OPGW Asi	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel				\$			•		<u>. </u>
4.1 345kV - (1 4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole 5. INSULATOR, FITTINGS, 5. 115kV Tar 5.2 115kV Tar 5.3 345kV Der 5.4 115kV Der 5.5 OPGW As 5.7 OPGW As	(1) 954kcmil 54/7 ACSS "Cardinal" (1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel					318,188		\$ 353,416		\$ 671,604
4.2 (1) 4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 A.10 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Der 5.4 115kV Der 5.5 OPGW Ass 5.7 OPGW Ass	(1) OPGW 36 Fiber AC-33/38/571 (1) 3/8" EHS7 Steel									
4.3 (1) 4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Dec 5.4 115kV Dec 5.5 OPGW Ass 5.7 OPGW Ass	1) 3/8" EHS7 Steel				90 \$		\$ 5.00	\$ -	\$ 6.90	
4.5 Remove E 4.6 Rer 4.7 Rer 4.8 115kV - (1 4.9 Rider Pole 4.10 Rider Pole 4.11 Rider Pole TOTAL: CONDUCTOR, SH 5. INSULATOR, FITTINGS, 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV De: 5.4 115kV De: 5.5 OPGW As: 5.7 OPGW As:		-	LF		35 \$ 47 \$		\$ 5.00 \$ 5.00	\$ - \$ -	\$ 6.35 \$ 5.47	\$ - \$ -
4.6 Rer 4.7 Rer 4.8 115kV - {1 4.9 4.10 Rider Pole 4.11 Rider Pole 5. INSULATOR, FITTINGS, 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Der 5.4 115kV Der 5.5.6 OPGW As	e Existing 115kV Cable From Existing Structures	-	Mile	+'	47 \$ - \$		\$ 5.00 \$ 30,000	\$ -		\$ -
4.7 Rer 4.8 115kV - (1 4.9 4.10 Rider Pole 4.11 Rider Pole TOTAL: CONDUCTOR, SH 5. INSULATOR, FITTINGS, 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Dei 5.4 115kV Dei 5.5 OPGW Asi 5.7 OPGW Asi	Remove Existing OPGW Cable		Mile	+	- 3 - \$		\$ 30,000	\$ -		\$ -
4.9 4.10 Rider Pole 4.11 Rider Pole 4.11 Rider Pole TOTAL: CONDUCTOR, SH 5. INSULATOR, FITTINGS, 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV De: 5.4 115kV De: 5.5 OPGW As: 5.7 OPGW As:	Remove Existing EH7	-	Mile	-	- \$	-		\$ -		\$ -
4.10 Rider Pole 4.11 Rider Pole TOTAL: CONDUCTOR, SH 5. INSULATOR, FITTINGS, 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV De: 5.4 115kV De: 5.6 OPGW As: 5.7 OPGW As:	(1) 954kcmil 54/7 ACSS "Cardinal"	-	LF	\$ 1.	90 \$	-	\$ 5.00	\$ -	\$ 6.90	\$ -
4.11 Rider Pole TOTAL: CONDUCTOR, SH 5. INSULATOR, FITTINGS, 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Dei 5.4 115kV Dei 5.5 OPGW Asi 5.7 OPGW Asi		-								
TOTAL: CONDUCTOR, SH 5. INSULATOR, FITTINGS, 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV De: 5.4 115kV De: 5.5 0PGW As: 5.7 0PGW As:	oles - Relocated	-	Set	7	- \$		7 3,500		\$ 3,500.00	
5. INSULATOR, FITTINGS, 5.1 345kV Tar 5.2 115kV Tar 5.3 345kV Dei 5.4 115kV Dei 5.5 5.6 OPGW As: 5.7 OPGW As:		-	EA	\$ 1,7			\$ 3,500	\$ -	,	\$ -
5.1 345kV Tar 5.2 115kV Tar 5.3 345kV De; 5.4 115kV De; 5.5 5.6 OPGW As; 5.7 OPGW As;	· · · · · · · · · · · · · · · · · · ·				\$	-		\$ -		\$ -
5.2 115kV Tar 5.3 345kV Dec 5.4 115kV Dec 5.5 OPGW As: 5.7 OPGW As:	Tangent (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,8	00 \$	-	\$ 720	\$ -	\$ 2,520	\$ -
5.3 345kV Dec 5.4 115kV Dec 5.5 5.6 OPGW As: 5.7 OPGW As:	Tangent (1-Group of 9-Bells Each Assembly)	18	Assembly		00 \$		\$ 560	\$ 10,080		\$ 26,280
5.5 5.6 OPGW As: 5.7 OPGW As:	Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly)	-	Assembly	\$ 1,8	00 \$			\$ -		\$ -
5.6 OPGW As: 5.7 OPGW As:	Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly)	28	Assembly	\$ 9	00 \$	25,200	\$ 560	\$ 15,680	\$ 1,460	\$ 40,880
5.7 OPGW As:			Assembly	1.	\$	-		\$ -		\$ -
	Assembly - Tangent	3	Assembly		00 \$	600	\$ 150			\$ 1,050
	Assembly - Angle / DE Assembly - Tangent	8	Assembly Assembly		50 \$ 00 \$	-,	\$ 150 \$ 150	\$ 1,200 \$ -		\$ 3,200 \$ -
	Assembly - Tangent Assembly - Angle / DE	-	Assembly		50 \$		\$ 150	\$ -		\$ - \$ -
	Splice Boxes	-	Set	\$ 1,7			\$ 1,746	\$ -		\$ -
	Splice & Test	-	EA	\$ 1,4			\$ 2,520			\$ -
	- Conductor	-	EA	\$	50 \$	-	\$ 35	\$ -	\$ 85	\$ -
5.13 Vibration	on Dampers - Conductor	-	EA	\$	35 \$	-	\$ 35	\$ -	\$ 70	\$ -
5.14 Shieldwire	vire / OPGW Dampers, Misc. Fittings	_	EA	Ś	27 \$	_	\$ 35	Ś -	\$ 62	\$ -
	anchors, and Accessories	-	EA	1	20 \$		\$ 885		\$ 1,605	
	naterials (Signs and Markers)	-	Mile		70 \$		\$ 1,006		\$ 1,776	
5.17	iateriais (SignS dilu Ividi REIS)						,			
5.18	ומנכוומוז לאפונס מוות ואומו עבו ב)									
5.19	racerians (signs ditu Widikets)									
5.20	racerions (organs ditu Markers)			1				\$ 27,410		\$ 71.410
					Ċ	44 000		27,410		\$ 71,410
L. Interconnect 6. MOB/DEMOB, ENGINE	ITTINGS, HARDWARE				\$	44,000 575,008		\$ 1,486,775		\$ 2,061,784

Item	Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Contractor Mobilization / Demobilization								
6.1	Mob / Demob	1	LS	\$ -	\$ -	\$ 20,618	\$ 20,618	\$ 20,618	\$ 20,618
	Project Management, Material Handling & Amenities								
6.2	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS			\$ 99,205	\$ 99,205	\$ 99,205	\$ 99,205
6.3	Utility PM and Project Oversite	1	LS		\$ -	\$ 20,618	\$ 20,618	\$ 20,618	\$ 20,618
6.4	Site Accommodation, Facilities, Storage	1	LS	\$ -	\$ -	\$ 20,618	\$ 20,618	\$ 20,618	\$ 20,618
	Engineering								
6.5	Design Engineering	1	LS	\$ -	\$ -	\$ 103,089	\$ 103,089	\$ 103,089	\$ 103,089
6.6	LiDAR	1	LS	\$ -	\$ -	\$ 6,185	\$ 6,185	\$ 6,185	\$ 6,185
6.7	Geotech	1	Location	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$ -	\$ -	\$ 14,432	\$ 14,432	\$ 14,432	\$ 14,432
	Testing & Commissioning								
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs								
6.10	Environmental Licensing & Permitting Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.11	Environmental Mitigation	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$ -	\$ -	\$ 6,185	\$ 6,185	\$ 6,185	\$ 6,185
6.13	Real Estate Costs	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.16		-	LS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$ 46,001	\$ 46,001	\$ -	\$ -	\$ 46,001	\$ 46,001
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		\$ -	\$ 2,062	\$ 2,062	\$ 2,062	\$ 2,062
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:				\$ 46,001		\$ 296,512		\$ 342,513

ITC T032 (Segment B) M. Interconnection Milan Station

5		Total:	\$ 745,311		
ITC T032 (Segment I	3)				
		Supply	Installation		Total
M. Interconnection Milan Station					
1. CLEARING & ACCESS	\$	-	\$ 121,100	\$	121,100
2. FOUNDATIONS	\$	84,375	\$ 135,279	\$	219,654
3. STRUCTURES	\$	130,328	\$ 140,393	\$	270,721
4. CONDUCTOR, SHIELDWIRE, OPGW	\$	-	\$ -	\$	-
5. INSULATORS, FITTINGS, HARDWARE	\$	13,600	\$ 8,440	\$	22,040
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:	\$	18,264	\$ 93,533	\$	111,797
CONTRACTOR MARK-UP (OH&P)	\$	-	\$ -	\$	-
SUBTOTAL:	\$	246,567	\$ 498,744	\$	745,311
CONTINGENCY ON ENTIRE PROJECT	\$	-	\$ -	\$	-
				_	

	CONTINGENCY ON ENTIRE PROJECT	\$ -	\$ -	\$ -					
	TOTAL:	\$ 246,567	\$ 498,744	\$ 745,311					
Description Item	of Work: Item Description	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
M. Inter	. Interconnection Milan Station								
1. CLEARING	& ACCESS								
1.1	Clearing the ROW - Heavy (mowing & clearing)	-	Acre	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -
1.2	Clearing the ROW - Light (mowing)	1.0	Acre	\$ -	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
1.3	Access Road	-	LF	\$ -	\$ -	\$ 45	\$ -	\$ 45	\$ -
1.4	Silt Fence	500.0	LF	\$ -	\$ -	\$ 4	\$ 2,000	\$ 4	\$ 2,000
1.5	Matting - Access and ROW	500.0	LF	\$ -	\$ -	\$ 70	\$ 35,000	\$ 70	\$ 35,000
1.6	Matting - To Work Area	525.0	LF	\$ -	\$ -	\$ 70	\$ 36,750	\$ 70	\$ 36,750
1.7	Snow Removal	-	LS	\$ -	\$ -	\$ 516,800	\$ -	\$ 516,800	\$ -
1.8	ROW Restoration	0.5	Mile	\$ -	\$ -	\$ 10,000	\$ 5,000	\$ 10,000	\$ 5,000
1.9	Work Pads	10,000.0	SF	\$ -	\$ -	\$ 4	\$ 35,200	\$ 4	\$ 35,200
1.10	Restoration for Work Pad areas	2,000.0	SF	\$ -	\$ -	\$ 0.2	\$ 300	\$ 0	\$ 300
1.11	Temporary Access Bridge	-	EA	\$ -	\$ -	\$ 20,035	\$ -	\$ 20,035	\$ -
1.12	Air Bridge	-	EA	\$ -	\$ -	\$ 14,445	\$ -	\$ 14,445	\$ -
1.13	Stabilized Construction Entrance	-	EA	\$ -	\$ -	\$ 4,580	\$ -	\$ 4,580	\$ -
1.14	Maintenance and Protection of Traffic on Public Roads	-	EA	\$ -	\$ -	\$ 4,130	\$ -	\$ 4,130	\$ -
1.15	Gates	-	EA	\$ 2,000	\$ -	\$ 2,500	\$ -	\$ 4,500	\$ -
1.16	Culverts / Misc. Access	-	EA	\$ 750	\$ -	\$ 1,250	\$ -	\$ 2,000	\$ -
1.17	Concrete Washout Station	1	EA	\$ -	\$ -	\$ 1,850	\$ 1,850	\$ 1,850	\$ 1,850
1.18					\$ -		\$ -		\$ -
1.19					\$ -		\$ -		\$ -
1.20	Crushed Rock	0	CY	\$ 27	\$ -	\$ 75	\$ -	\$ 102	\$ -
TOTAL - CLEA	RING & ACCESS				\$ -		\$ 121,100		\$ 121,100
2. FOUNDATI	ONS								
2.1	Drilled Pier - 115kV Single Circuit Single Pole Angle/DE	2	EA	\$ 42,187	\$ 84,375	\$ 42,639	\$ 85,279	\$ 84,827	\$ 169,654
2.2									•
2.3									
2.4									
2.5	Rock Excavation Adder	25	СҮ	\$ -	\$ -	\$ 2,000	\$ 50,000	\$ 2,000	\$ 50,000
2.6					\$ -		\$ -		\$ -
2.7					\$ -		\$ -		\$ -
2.8					\$ -		\$ -		\$ -
2.9					\$ - \$ -		\$ - \$ -		\$ - \$ -
2.10					\$ -		\$ -		\$ -
	1	1	1		1 *	i .	1 7		7

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Estimate

Revision:

2.12	* - * - * - * - * * - * * - * * - * * - * * * - * * * * * * * * * * * * * * * * * * * *	Total Unit Rate			Material Cumply Cost						
2.13	\$ -		Cost	Supply Rate	Material Supply Cost	oly Rate	Material	Unit of Measure	Estimated Quantity	Item Description	Item
2.16	7		\$ -								2.12
2.5 STANCHURS S. 84,775 S. 135,279	l ¢		·			-					
STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STRUCTURES STR	-		·								
STRUCTURES	\$ - \$ 219,654									IDATIONS	
3.1 1354V Single Circuit Single Pole Angle/PE	\$ 219,034		3 153,275		\$ 64,573						
3.2	\$ 258,632	\$ 129,316	\$ 129,316	\$ 64,658	\$ 129,316	64,658	\$	Structure	2		
3.4											3.2
3.5											
3.6	\$ -										
3.7		\$ 6,045					\$	Pole	2	Install Grounding and Grounding Accessories	
3.8	\$ -										
3.9	\$ - \$ -										
3.10	\$ -		•								
3.11	\$ -		_								
3.12	\$ -		'								
3.14	\$ -		\$ -								3.12
S	\$ -										
S 130,328 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939 S 140,939	\$ -										3.14
## CONDUCTOR, SHIELDWIRE, OPGW ## 1.1 3458V-(2) 954kcmil 54/7 ACSS "Cardinal" ## 2. LF \$ 1.90 \$ - \$ 5.00 \$ - \$ 5.60 \$ - \$ 6. ## 3. (1) 13/8" FH57 Steel ## 2. LF \$ 1.35 \$ - \$ 5.00 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ - \$ 5.60 \$ -	\$ -		\$ -		\$ -						3.15
## CONDUCTOR, SHIELDWIRE, OPGW ## A.1 345W-(2) 954kcml 34/7 ACSS "Cardinal"	\$ 270,721		\$ 140,393		\$ 130.328					CTURES	TOTAL - STRUC
A 1 345kV - (2) 954kcmil 54/7 ACSS "Cardinal"	7 2.0,122		+ = 1.0,000		7 201,020						
4.2	\$ -	\$ 6.90	\$ -	\$ 5.00	\$ -	1.90	Ś	LF	-		
4.3											
4.6 Remove Existing OPGW Cable - Mile \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ - \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$ 12,000 \$			\$ -						-		
4.7 Remove Existing EH7	\$ -	\$ 30,000.00	\$ -	\$ 30,000	\$ -	-	\$	Mile	-	Remove Existing 115kV Cable From Existing Structures	4.5
4.8			\$ -						-		
4.9											
A.10 Rider Poles - Relocated - Set \$ - \$ \$ 3,500 \$ - \$ 3,500 \$ - \$ 3,500 \$ - \$ 3,500 \$ - \$ 3,500 \$ - \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5,250 \$ 5	\$ -	\$ 6.90	\$ -	\$ 5.00	\$ -	1.90	\$	LF		115kV - (1) 954kcmil 54/7 ACSS "Cardinal"	
A.11 Rider Poles	\$ -	ć 2.500.00	ć	ć 2.500	ć		<u> </u>	Cot		Bider Deles Delegated	
S			'								
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5.2 115kV Tangent (1-Group of 9-Bells Each Assembly) - Assembly \$ 900 \$ - \$ 5.0 \$ - \$ 1.4 5.3 345kV Dead-end & Angle Insulators (1-Group of 18-Bells Each Assembly) 14 Assembly \$ 1,800 \$ - \$ 7.20 \$ - \$ 2,5 5.4 115kV Dead-end & Angle Insulators (1-Group of 9-Bells Each Assembly) 14 Assembly \$ 900 \$ 1.600 \$ 7.840 \$ 1.4 5.5 - - - Assembly \$ 900 \$ 1.600 \$ 5 7.840 \$ 1.4 5.5 - - - Assembly \$ 900 \$ 1.600 \$ 5 7.840 \$ 1.4 5.6 OPGW Assembly - Tangent - Assembly \$ 200 \$ - \$ 1.5 \$ 6 0.5 3 3 5.7 OPGW Assembly - Angle / DE - 4 Assembly \$ 200 \$ -	-										
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			'								
5.12 Spacer - Conductor FA \$ 50 \$ - \$ 35 \$ - \$			\$ -						-		
	\$ -	\$ 85	\$ -	\$ 35	\$ -	50	\$	EA	-	Spacer - Conductor	5.12
5.13 Vibration Dampers - Conductor - EA \$ 35 \$ - \$ 35 \$ - \$	\$ -	\$ 70	\$ -	\$ 35	\$ -	35	\$	EA	-	Vibration Dampers - Conductor	5.13
5.14 Shieldwire / OPGW Dampers, Misc. Fittings - EA \$ 27 \$ - \$ 35 \$ - \$	\$ -	\$ 62	\$ -	\$ 35	\$ -	27	s	FA	_	Shieldwire / OPGW Dampers, Misc. Fittings	5.14
	· ·	•					L.				
			7								
5.17 Wille 7 / 70 2 2,000 7 7 7 7 7 7 7 7 7	-		7	7 1,000	T	- ,,,,	Ť	···iic		Compro and markers)	
5.18											
5.19											5.19
5.20											
TOTAL - INSULATOR, FITTINGS, HARDWARE \$ 13,600 \$ 8,440	\$ 22,040		\$ 8,440		\$ 13,600					LATOR, FITTINGS, HARDWARE	TOTAL - INSUL
M. Interconnection Milan Station \$ 228,303 \$ 405,211	\$ 633,514		\$ 405,211		\$ 228,303					connection Milan Station	M. Inter
6. MOB/DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:											
Contractor Mobilization / Demobilization											-,,
	\$ 6,335	\$ 6,335	\$ 6,335	\$ 6,335	\$ -		\$	LS	1		6.1
Project Management, Material Handling & Amenities										Project Management, Material Handling & Amenities	

ltem	item Description	Estimated Quantity	Unit of Measure	Material Supply Ra	ate	Material Supply Cost	Labor & Equipment Supply Rate	Labor & Equipment Cost	Total Unit Rate	TOTAL
	Project Management & Staffing (includes PM, Field Engineers / Supervision, Scheduler and Cost Manager, SHEQ Staff, and Admin Staff)	1	LS				\$ 30,482	\$ 30,482	\$ 30,482	\$ 30,482
6.3	Utility PM and Project Oversite	1	LS			\$ -	\$ 6,335	\$ 6,335	\$ 6,335	\$ 6,335
6.4	Site Accommodation, Facilities, Storage	1	LS	\$.	\$ -	\$ 6,335	\$ 6,335	\$ 6,335	\$ 6,335
	Engineering									
6.5	Design Engineering	1	LS	\$. :	\$ -	\$ 31,676	\$ 31,676	\$ 31,676	\$ 31,676
6.6	LiDAR	1	LS	\$. !	\$ -	\$ 1,901	\$ 1,901	\$ 1,901	\$ 1,901
6.7	Geotech	1	Location	\$.	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500
6.8	Surveying/Staking	1	LS	\$. !	\$ -	\$ 4,435	\$ 4,435	\$ 4,435	\$ 4,435
	Testing & Commissioning									
6.9	Testing & Commissioning of T-Line and Equipment	-	LS	\$.	\$ -	\$ -	\$ -	\$ -	\$ -
	Permitting and Additional Costs									
6.10	Environmental Licensing & Permitting Costs	-	LS	\$.	\$ -	\$ -	\$ -	\$ -	\$ -
	Environmental Mitigation	-	LS	\$. !	\$ -	\$ -	\$ -	\$ -	\$ -
6.12	Warranties / LOC's	1	LS	\$. !	\$ -	\$ 1,901	\$ 1,901	\$ 1,901	\$ 1,901
6.13	Real Estate Costs	-	LS	\$. !	\$ -	\$ -	\$ -	\$ -	\$ -
6.14	Legal Fees	-	LS	\$. !	\$ -	\$ -	\$ -	\$ -	\$ -
6.15	Allowance for Funds Used During Construction (AFUDC)	-	LS	\$. !	\$ -	\$ -	\$ -	\$ -	\$ -
6.16		-	LS	\$. !	\$ -	\$ -	\$ -	\$ -	\$ -
6.17	Sales Tax on Materials	1	LS	\$ 18,2	64	\$ 18,264	\$ -	\$ -	\$ 18,264	\$ 18,264
6.18	Fees for permits, including roadway, railroad, building or other local permits	1	LS		-	\$ -	\$ 634	\$ 634	\$ 634	\$ 634
TOTAL - MOB/	DEMOB, ENGINEERING, PERMITTING, T&C, PM & INDIRECTS:					\$ 18,264		\$ 93,533		\$ 111,797

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NAT & NYPA - T032 - (Segment B)

N. System Upgrade Facilities (Cricket Valley to Long Mt. Line)

Estimate Revision: Total: \$ 3,943,950

SYSTEM UPG	RADE FACILITIES	Estimated Quantity	Unit of Measure	Material Supply Rate	Material Supply Sun	Labor & Equipment Supply Rate	Labor & Equipment Sum	Total Unit Rate	TOTAL
SUF 1	Transmission Line Upgrade Cricket Valley - Connecticut Border to Long Mountain (3.3 + 6.0 = 9.3 Miles)								
1.1	345kV - (1) 954kcmil 45/7 ACSS "Rail" Conductor (Cricket Vly to Conn Border)	109,771.20	LF	\$ 2.50	\$ 274,428	\$ \$ 5.00	\$ 548,856	\$ 8	\$ 823,284
1.2	345kV - (1) 2312kcmil 76/19 ACSS "Thrasher" Conductor (Conn Border to Long Mtn.)	99,792.00	LF	\$ 8.00	\$ 798,336	\$ 5.00	\$ 498,960	\$ 13	\$ 1,297,296
1.3	Remove Existing 795 ACSS Conductor and Accessories (Cricket Vly to Conn Border)	3.30	Mile	\$ -	\$ -	\$ 30,000.00	\$ 99,000	\$ 30,000	\$ 99,000
1.4	Remove Existing 2156kmil ACSS Conductor and Accessories (Conn Border to Long Mtn.)	6.00	Mile	\$ -	\$ -	\$ 30,000.00	\$ 180,000	\$ 30,000	\$ 180,000
1.5	Rider Poles	10.00	Sets	\$ 1,750.00	\$ 17,500	\$ 3,500.00	\$ 35,000	\$ 5,250	\$ 52,500
1.6	345kV Vertical Tangent Insulator Assembly	147.00	Assembly	\$ 1,800.00	\$ 264,600	\$ 720.00	\$ 105,840	\$ 2,520	\$ 370,440
1.7	345kV Deadend Insulator Assembly	132.00	Assembly	\$ 1,800.00	\$ 237,600	\$ 720.00	\$ 95,040	\$ 2,520	\$ 332,640
	Subtotal SUG 1 Direct Cost				\$ 1,592,464		\$ 1,562,696		\$ 3,155,160
2.0	Indirect Cost (25% of Direct Cost)				\$ 398,116	;	\$ 390,674		\$ 788,790
	TOTAL:				\$ 1,990,580		\$ 1,953,370		\$ 3,943,950

ITC T032 (Segment B)

ESTIMATE ASSUMPTIONS & CLARIFICATIONS

- 1 Cost Estimate is based on 2017 rates.
- Construction schedule is in accordance with proposed schedule we have assumed continuous working with no breaks in the schedule. Six months have been added to the construction schedule for start up and close out works and assisting in pre-construction activities (i.e. permitting activities, material procurement etc.).
- We have assumed a typical work week of five-(5) days per week at ten-(10) hours per day (5 x 10 hour days).
- 4 All labor rates and benefits used for estimating purposes are taken from IBEW Local 1249 working agreement as updated 5-8-2017.
- We have assumed that the Access Road included in Developer Estimate will be Type 1 Gravel Type. 20% of the total length of the line is assumed to use Type 1 Gravel road and 80% of the line length access to be used wood matting. In addition 75 feet of wood matting is included from the access matting to the work pad area matting. The estimate also include 5,000 square feet of wood matting for each structure work area within the ROW. For the ground restoration (seed, straw and woven mat), 20% of the work pad area included.
- Costs will vary for handling and disposal of contaminated spoils, depending on type of contaminants and availability / location of the appropriate tipping facility. Since there is not enough information to provide a quantified estimate for this item, allowance is included in the contingency monies.
- Costs have been developed based on historical data from Projects of a similar nature (AACE Class 5 and 4 Estimating Practices). We have not engaged any subcontractors for formal quotes.
- 8 Foundation rates include supply and installation of materials. Drilled Pier rates include supply and testing of concrete, rebar cage and the use of temp or permanent casing.
- 9 A Contractor Mark-Up (OH&P) of 15% has been included in the Total section.
- 10 We have assumed that all project details provided are accurate unless noted otherwise.
- 11 Any SUF pricing includes 35% to cover Contractor markup (15%) and contingency (20%)
- 12 A contractor allowance of 1% for mobilization and demobilization has been included in the total section.
- A contractor allowance of 4.184% for project management and staffing has been included in the total section. This also includes agricultural inspector, engineering inspector, safety inspector, compliance inspector, environmental inspector, and SWPP inspector.
- An allowance of 1% for Utility PM and Project Oversite staffing has been included in the total section.
- 15 A contractor allowance of 1% for site accommodation, facilities, and storage has been included in the total section.
- 16 An allowance of 5% for transmission design and engineering has been included in the total section.
- 17 An allowance of 8% for substation design and engineering has been included in the total section.
- 18 An allowance of 0.7% for survey and staking of the transmission line and substation layout has been included in the total section.
- An allowance of 0.3% for LIDAR of the transmission line has been included in the total section.
- 20 An allowance of 3.75% for substation testing and commissioning has been included in the total section.
- An allowance of \$20,000.00 per circuit for transmission line testing and commissioning has been included in the total section.
- 22 New York state sales tax of 8% is included in all material pricing.
- 23 An allowance of 1.5% for insurance is included in the DPS sheet.
- Rock excavation not provided in proposal foundation data, all structures are drilled shaft foundation, rock excavation assumed same guantity as in National Grid's proposal.
- 25 An additional Quantity of 5% have been added to conductors, OPGW, & OHSW for sag and jumpers.
 - Cricket Valley to Long Mountain line upgrade: The length of the re-conductor between Cricket Valley and the NY/CT border is 3.3 miles and will remove the existing (to be installed on CV project) 2 bundle 795 ACSS conductor and install new 2 bundle Rail 954 ACSS conductor.
 - -The length of the re-conductor between the NY/CT border and Long Mountain is 6 miles and will remove the existing single 2156 ACSS conductor and install new single Thrasher 2312 ACSS conductor.
- -The Insulators and associated conductor hardware will be replaced.
 - -The existing structures are assumed to have adequate strength to support the new conductors.
 - -The estimate is a rough order of magnitude estimate as no engineering was performed and SECo did not have access to record drawings.
- 27 The SUF estimates for the stations are rough order of magnitude estimates. No engineering was performed and SECo did not have access to record drawings.