AES Indiana

AES Indiana – Petersburg BESS

Issue: For Bid

Issue Date:01/25/2023

Exhibit A – Attachment 10

Submittal Requirements

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1.0 GENERAL

Contractor shall submit documentation including design, procurement, and construction documents for all areas of Work to enable Owner to understand fully the Project as such has been characterized in the Contract. Submittals to Owner will initiate shortly after the Effective Date of the Contract and will continue up to issuance of As-Built Drawings, red-line mark-ups of existing drawings, and other final documents associated with Substantial Completion, Final Completion, and the Warranty Callback Period. In accordance with Contract, the Contractor will maintain a Master Document List ("MDL") that contains a schedule and log of Submittals to the Owner consistent with this Exhibit.

Owner will review and comment on documents and other records prepared by the Contractor and its Subcontractors. The objective of this review cycle is to enable the Owner to verify that Contractor Work is in compliance with the Contract, particularly in respect of quality, operability, maintainability, industry standards, building code minimum requirements, and safety. As indicated in the Contract, the Owner's review process shall be included in the Project schedule but shall not obviate Contractor's responsibility to deliver the Project per obligations therein.

2.0 SUBMITTAL REQUIREMENTS

The Contractor shall prepare document Submittals identified in this Exhibit A Attachment 10 in accordance with the provisions contained herein.

2.1 General Requirements

Contractor shall prepare Project-specific drawings and documents as required by Contract. The use of standard drawings shall only be allowed when there is no deviation from the depicted information and the actual intended installation conditions.

Submittals and correspondence shall be in the English language. Submittals shall use U.S. customary units. SI unit symbols may be referenced at the Contractor's option.

2.2 Equipment Numbering

Contractor shall propose equipment numbering and naming convention for Owner review and approval.

2.3 Drawings

2.3.1 Title Block

Contractor shall use Contractor's standard drawing title block.

The following Owner's information shall be included in or around the Contractor's title block:

AES Indiana

2.3.2 Drawing Sizes

Drawing sizes shall comply with ISO 216, A series.

Use of a drawing size other than listed here shall be as approved by the Owner.

Full size drawings should be ARCH D (24" x 36"), ANSI D (22" x 34"), or ANSI E (32" x 42") size. ANSI A (8-1/2" x 11") and ANSI B (11" x 17") size drawings shall only be used when information can be displayed clearly and legibly.

The use of ARCH F size shall be avoided.

2.3.3 Scale and Measurements

Contractor shall prepare drawings accurately to a scale, and sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.

2.4 Submittal Media

Contractor shall submit documents in the form of electronic files to the Owner's Document Management System (DMS).

Operating and Maintenance (O&M) Manuals shall be provided in paper copies in addition to specified electronic format [PDF].

Final As-built Drawings shall be provided in both PDF and native electronic (AutoCAD ".dwg" format) files with all reference files embedded. Electronic files shall be in accordance with the requirements outlined in this Exhibit.

Red-line mark-ups of existing drawings shall be provided in accordance with the requirements outlined in Appendix 10 – Modification of Existing Owner Drawings.

2.5 Quality Assurance

Submittals shall be complete with respect to dimensions, design criteria, materials of construction, and other information specified to enable Owner to review the information effectively.

Information on all Contractor and Subcontractor documents shall be checked and reviewed by the Contractor prior to submission for Owner review.

2.6 Specific Submittal Requirements

The following paragraphs provide general requirements for specific types of Submittals. Since this listing is general in nature, it is possible that some Submittals listed herein may not be required by this Contract. Other Sections of this Exhibit Fnd the Contract may include additional requirements for the general requirements listed here.

2.6.1 Master Document List (MDL)

An MDL listing all drawings and data that have been submitted shall be maintained by the Contractor. The MDL shall include the following fields: document number (title where unique number cannot be provided by vendors), description, revision level, date of revision, and submittal date.

The MDL shall include the Contractor's documents and all Subcontractor documents that have been submitted to the Owner. The MDL shall provide information required to cross reference Subcontractor and Sub-supplier document numbering with Contractor assigned document numbering.

Contractor shall also submit a document list that indicates the documents by type that the Contractor plans to submit to the Owner.

The first submittal of the MDL shall include all submittals the Contractor anticipates submitting during the duration of the Work, to the best of their knowledge. The MDL shall then be maintained current for the duration of the Project.

Submit the MDL on a monthly basis, or when requested by the Owner.

2.6.2 Site Plans and Partial Site Plans

Site Plan drawings shall indicate overall site layout indicating equipment and site feature layouts. Partial Site Plans shall be provided for additional scope and discipline detail in each area and shall be referenced back to the overall Site Plan key. Multiple Site Plan drawings may be needed to indicate different information clearly. The following information, at a minimum shall be clearly provided on the Site Plan and Partial Site Plan drawing set:

Overall project site layout including property lines, project boundary lines, setbacks, major site equipment and features such as solar PV arrays, inverter stations, MET stations, above grade and below grade electrical cable routing and transition points, electrical equipment, substation yard, storage

enclosures, roads, parking, fencing and gates, site grading and drainage and stormwater management features and systems, seeding plans and other information required to represent the full Project plan.

2.6.3 General Arrangement Drawings

The general arrangement (GA) drawings shall indicate at a minimum three perspective views of the subject matter (plan view, elevation view, and side view). Additional views or sections shall be provided to clearly indicate the extents and features of the subject. GA drawings are expected for substation yard, control house, storage enclosures, as applicable, typical inverter arrangement, typical solar tracker arrangement, fencing and gate systems, where not provided as part of a typical details sheet, and any other equipment or structure areas applicable to the Work.

The GA drawings shall include the details of the Contractor's Work and that of all Sub-vendors that the Contractor uses in the Work. The Contractor is responsible for consolidation of all information from their suppliers onto its GA drawings. The GA drawings shall locate all equipment and show their centerline dimensions from new or existing column rows. Column row identification for new column rows shall be integrated into the existing plant column row numbering/lettering scheme.

Pull spaces and maintenance removal zones shall also be indicated on the GA drawings. The Contractor shall indicate any areas that require more than three feet of clearance around their equipment boundary on the GA drawings for access or maintenance requirements.

2.6.4 Manufacturers' Literature

Where standard drawings and cut sheets are furnished which cover several variations of the general class of equipment, each drawing shall be annotated to indicate exactly which parts of the drawing apply to the equipment being furnished. Use hatch marks to indicate variations which do not apply to the Submittal. The use of "highlighting markers" will not be an acceptable means of annotating Submittals. Such annotation shall also include proper identification of the Submittal permanently attached to the drawing.

2.6.5 Structural Steel Drawings

Structural steel drawings shall be 2D. The drawings shall provide dimensional information and perspectives and reference points shall be indicated clearly for each drawing.

2.6.6 Dimensioned Outline Drawings

Outline drawings shall depict graphically and dimensionally the configurations, profile, and limitations of parts and assemblies. Perspectives and reference points shall be indicated clearly for each view.

2.6.7 Foundation Plans/Interface Detail

Foundation plans shall provide sufficient dimensional and configuration details to facilitate foundation design and installation planning by the Contractor. The drawings shall also include the applicable Subcontractor's recommendations for installation methods and materials.

Foundation interface details shall be furnished as listed below:

- Overall dimensions, embed and blockout requirements, bolt/anchor bolt locations, sizes, and details
- Recommended/required mounting details clearly depicting bolting location, size, material, and projection requirements
- Equipment weights, operating loads, and center of gravity

- Either actual or "not-to-exceed" foundation interface design loads, and their points of application, based on loading combinations (e.g., Dead Load, Live Load, Operating Load, Test Load, Wind, Seismic, Dynamic, etc.)
- Identification of loading directions, magnitudes, and any other permanent data required for the foundation design.

2.6.8 Performance Curves

Performance curves or equipment characteristic curves of either the predicted or demonstrated type, as required, shall provide definitive, quantitative, and graphic performance data full operating range of the equipment being provided. The format and conventions used in defining performance variables and parameters shall be consistent with the codes and standards applicable to the equipment. Performance curves shall include major and minor graduations on the axis. The graph shall be sized to clearly demonstrate the expected equipment performance across its range of operating environmental conditions. The axis should extend beyond the first and last data points in both directions. All graphs should have a short, descriptive title at the top of each graph, detailing what is being measured. Each axis should be clearly labeled with titles and units. Intervals on the axis shall be whole number integer values of 1, 2, 5, or 10, or the measuring unit being communicated.

2.6.9 Wiring Diagrams

Wiring, connection and interconnection diagrams shall show the electrical connections of an installation or its component devices and parts. Schematics and connection diagrams, such as one-line and three-line diagrams, shall also be included in this category.

Drawings supplied under this category shall provide such detail as is necessary to make or trace the connections involved and understand the circuit functionality without the need to have the manufacturer drawings, and with a minimum level of detail as shown in the IPL sample drawings in Appendix 11g. The drawings must include cable numbers, conductor colors and tags, pair/triad numbers, and To/From terminal designations. If cables are shielded, the shields shall be shown on the drawings. All spare conductors shall be shown on the drawings. All terminal strips shall be labeled and each terminal numbered. The drawings shall cover internal and external connections for Switchgear and MCC services. For non-Switchgear or MCC service, indication on the drawings shall be provided as to the function/signal that the field cables pick-up at the respective equipment and device terminals, and with the respective vendor drawing referenced for further details.

Final drawing format will be determined after award of Contract through the submittals of project specific seed drawings for all expected services (e.g. MCC starters, contactors and breaker feeds, Switchgear feeder breakers to various services, control panels, junction boxes, field devices, VFDs, motor control circuits, etc.). Other seed files for single lines, three-lines, load lists, cable tabs to also be included. Seed files to be submitted for Owner review and approval.

2.6.10 Bill of Materials

A bill of materials, commodities, or equipment shall consist of all components or bulk materials used in the item to which the bill applies (e.g., all of the sub-components in an electrical cabinet, control house, substation, invertor station, typical solar panel tracking unit, etc.). The bill of materials may be either integral to the design drawings or separate and shall include sufficient descriptive data to facilitate procurement of equivalent parts, materials, or sub-components if needed.

2.6.11 Cross Sectional Drawings

Cross-sectional drawings shall present a view of an object in a perspective that cuts away all or part of an object to show its shape and construction at the cutting plane. Cross-section drawings shall be furnished by the Subcontractor where the construction or hidden features of an object cannot be shown clearly by outside views.

2.6.12 Recommended Spare Parts List with Prices

The recommended spare parts list shall provide sufficient detail to facilitate procurement of equivalent parts during the equipment's operational life cycle. Requirements for recommended spare parts lists are included in Exhibit F, Section 01 7843 – Spare Parts and Special Tools of this Specification. The list shall include the current price, estimated lead time, and OEM part number. The list shall be equipment manufacturer's recommended two-year operational spare parts.

2.6.13 Shop (Fabrication) Drawings

Shop (fabrication) Drawings shall provide, in detail appropriate to the nature or complexity of the items, configuration and dimensional data, required processes, procedures, sequences and materials required to fabricate the required items. The information shall be indicated directly on the drawing or by reference to other documents.

2.6.14 Shop (Detail) Drawings

Shop (detail) Drawings shall depict complete item requirements for the parts depicted on the drawings including, as applicable, configuration, dimensions, tolerances, materials, mandatory processes, surface finish, protective coatings, and symbols.

2.6.15 Assembly Drawings

Each Assembly Drawing shall show the relationship of parts, components, and assemblies to each other. Subordinate parts or components shall be called out on the field of the drawing, by part or finding numbers, and reference shall be made to related drawings and listed as required.

2.6.16 Erection Drawings

Erection Drawings shall show connection details required for erection or assembly of individual items and/or of assembly of component parts of total items or facilities.

2.6.17 Calculations

Records of design calculations shall be identifiable by subject (including structure, system, or component to which it applies), originator, reviewer, and dates. Calculations shall be sufficiently detailed as to purpose, method, assumptions, design input, and units so that a person technically qualified in the subject can review and understand the analysis and verify the adequacy of the results without recourse to the originator. Calculations shall cover all expected operation schemes under normal every day cases to extreme weather events like snow, wind and earthquake.

2.6.18 Manufacturing/Inspection and Test Sequence Diagrams

Manufacturing, inspection, and test activities shall be graphically defined in an activity-time diagram, (critical path method [CPM] network or other appropriate format) which shall clearly indicate the date, duration, and significance of major events within the scope of the appropriate procurement Specification or Subcontract.

2.6.19 Inspection/Test Procedures

Inspection and test procedures shall be provided in a documented form that adequately defines the elements, prerequisites, acceptance, criteria, equipment, sequence responsibilities, and personnel qualifications for completion of the inspection and testing activities required by the Technical Specifications and/or Codes for the items or services supplied.

2.6.20 Inspection/Test Data

"Inspection/Test Data" shall be detailed quantitative and qualitative data which results from examination, observation, measurement or subjecting components, assemblies or systems to actual physical, chemical, environmental or operating conditions. Report shall include, or include by reference:

the applicable codes, standards, and specifications; the procedures and methods utilized; and the prerequisite qualifications of personnel and equipment required for the inspection/testing activities. Acceptance/rejection criteria shall be clearly indicated or referenced to the extent that knowledgeable individuals can review and interpret the data without recourse to the originator.

2.6.21 Statement or Certification of Compliance

This documentation shall be in the form of written statements, signed by a member of the Contractor's or Subcontractor's organization who has the authorization to commit or obligate the organization in legal or contractual matters. Various compliance statements are required by the Technical Specifications in addition to other compliance statements specified elsewhere in the Contract Documents. Written, signed statements required by the Technical Specifications typically are described as shown below:

- Personnel certifications – Written documents issued by a laboratory, school, or other organization recognized or authorized by a board or standards committee to determine the qualification of an individual to perform a particular task, test, or inspection. Certifications such as Welder's Certification per AWS D.1.1 or ASME, NACE International, NDE standards, and other such certification statements are in this category;
- Equipment certifications – Written documents signed by an authorized representative of the manufacturer or fabricator, certifying that the item of equipment conforms with the specified requirements;
- Test data certifications – Written documents or forms signed by an authorized representative of the organization that conducted the test attesting that the actual properties or results of the test comply with the specified requirements. Mill test reports, concrete cylinder breaks, metallurgical test results, and other such results or reports are in this category.

2.6.22 Other Certification Statements

The content, format, and nature of other required certifications shall be determined by the applicable codes, standards, and specifications. Where this information is not readily available, it is the Contractor's obligation to notify the Owner in writing. The Contractor shall also propose their plans or procedures for providing such certifications, or state their rationale and technical justification for not providing the required certifications.

2.6.23 Receiving Instructions (Inspection and Test)

Receiving instructions shall include, where appropriate, detailed requirements for receipt, inspection, unloading, unpacking, testing, marking, identification, documentation, and other requirements unique to the supplied equipment or materials.

2.6.24 Storage Instructions

Storage instructions shall provide, in written form, the detailed requirements necessary to minimize the possibility of damage or deterioration of the items supplied. Special requirements, environments, or materials and equipment shall be adequately prescribed to assure the continuing integrity and performance of the items supplied. Storage instructions shall be provided prior to the time storage activities begin.

2.6.25 Handling and Lifting Instructions

Handling and lifting instructions shall provide written procedures for handling the supplied items and shall include (as appropriate) weights, sling locations, balance points, methods of attachments, maximum hoist line speeds, special fixtures and equipment, and other pertinent features considered necessary for safe handling and to avoid damage of equipment or components during handing. Handling and lifting instructions shall be provided prior to the time handling or lifting activities begin.

2.6.26 Operation & Maintenance (O&M) Manuals

The O&M manuals shall be created and assembled and submitted per the requirements below, those listed in Exhibit F – Scope of Work, and the Contract.

2.6.26.1 Submittals

2.6.26.1.1 Preliminary

The Contractor shall submit three (3) hard copies and one (1) electronic copy of the preliminary draft O&M manuals to the Owner for review.

The Contractor shall submit one (1) hard copy and one (1) electronic copy of the final proof version of the O&M manuals for Owner review.

The Contractor shall submit O&M manuals for use during training sessions at the Site.

2.6.26.1.2 Final

The Contractor shall submit eight (8) hard copies and one (1) electronic copy of the final O&M manual a minimum of one (1) month prior to the scheduled start of site check-outs, acceptance testing and commissioning activities of the Work.

Revisions to the O&M manuals shall be by submittal of revised pages for each copy of the final O&M manual and replacement of each electronic copy.

The Contractor shall issue electronic copies of the O&M manuals in a searchable electronic format uploaded to Owner DMS. Electronic manuals shall have a linked index/bookmarking feature incorporated. Files shall be in Adobe portable document format (PDF), with Microsoft Word version of the O&M text, and native electronic versions of each included reference file provided separately.

2.6.26.2 O&M Manual Contents

The Contractor shall prepare manuals in accordance with the provisions of this section.

2.6.26.2.1 Format

Size	8-1/2 inches x 11 inches
Paper:	White, bond, at least 20 lb weight
Text:	Arial format, preferred.
Drawings:	11 inches in height preferable; bind in with text; foldout acceptable, larger drawings acceptable but fold to fit within the manual and provide a drawing pocket inside rear cover or bind in with text.
Flysheets:	Separate each portion of the manual with neatly prepared flysheets briefly describing contents of the ensuing portion; flysheets may be in color.
Binders:	D-ring binders shall be provided with at least ½ inch but no more than ¾" of free space. All binders are subject to the Owner's or Owner's engineer's approval.
Measurements:	Provide all measurements in U.S. customary units such as feet-and-inches, pounds, and cfm; where items may be expected to be measured in accordance with metric formulae, provide additional measurements in the International System of Units (SI).

The Contractor shall provide front and back covers for each manual using durable material approved by the Owner or Owner's engineer and clearly identified on or through the cover with at least the following information:

- OPERATING AND MAINTENANCE INSTRUCTIONS
- (name of Contractor)
- (general subject of this manual)
- Project Site Name
- Volume _ of _

2.6.26.2.2 Table of Contents

A master table of contents shall be provided at the front of each manual providing a listing of all O&M manual volumes provided for this project. This shall be provided in addition to the manual specific table of contents which shall provide immediate information as to location within that specific manual of all pertinent information regarding the installed systems.

2.6.26.2.3 Content

The O&M manuals shall be fully indexed, the content shall conform to the requirements described in this article and shall be complete and specific to all the systems, auxiliary systems and equipment supplied.

The manuals shall include a complete set of certified drawings and figures including, where applicable to the Work, the following minimum information: nameplate data, loop & logic diagrams, system descriptions, one- and three-line diagrams, schematics and wiring diagrams, HMI graphic snapshots, plan and elevation general arrangement drawings, PV panel performance curves, inverter operational curves, motor data and curves, etc.

Complete instructions regarding operation and maintenance of all equipment involved including lubrication, disassembly, and reassembly.

Complete nomenclature of all parts of all equipment.

Complete nomenclature and part numbers of all replaceable parts, name and address of nearest vendor, and all other data pertinent to procurement procedures.

Material and information that does not contribute to the understanding of the design, operation and maintenance of the equipment shall be excluded from the manuals. Information that does not apply shall be removed from the manual or redacted.

Drawings, diagrams, pictures or photographs shall be used to add to the understanding of the text. Manufacturers' bulletins, brochures, cut sheets, and descriptive data, where pertinent, may be integrated into the overall manual. These materials shall clearly indicate the precise items furnished under this specification and shall be edited to remove irrelevant material.

The manuals shall contain information suitable for personnel who have received a basic training and/or have a knowledge and experience of similar equipment.

The manuals shall alert the operating staff to any hazard inherent in the equipment or likely to arise in the implementation of operating or maintenance procedures.

A description of each component including Contractor/Vendor’s standard catalog information.

2.6.26.2.4 Content Organization

The O&M manual shall be organized by sections. If the overall quantity of information is greater than a 4” binder the manual shall be organized in multiple volumes. The manual should be arranged to enable normal operation of the equipment without undue reference to other documents.

The O&M manuals shall contain the functional content as listed below, however the organization and format shall be in accordance with the Contractor’s standard.

Operation

1. Table of contents for section

2. Overall system (or equipment) overview description, operating philosophy, and operating conditions
3. Detailed description of equipment
4. Detailed description of instrumentation & controls, interlocks, and alarms
5. Operational procedures, including:
   - Safety Warnings
   - Operating limits, design data and characteristic curves
   - Start-up instructions
   - Operating instructions
   - Emergency procedures
   - Shutdown instructions

   The start-up, operating and shutdown instructions shall include step by step procedures, precautions, critical points to be observed and any differences in procedures for initial operation, normal operation and pre- and post-maintenance activities
6. Preservation instructions, lay-up guidance / procedures
7. Initial startup and commissioning instructions
8. Details of software programs for all control and supervisory equipment, with adequate comments to enable their comprehension by programming engineers other than those originating the material
9. As-Built arrangement drawings, if available, pictures or photographs of major equipment items, single line diagrams and block cable diagrams
10. Complete equipment lists, cable lists and instrument lists

Maintenance

1. Table of contents for section
2. Recommended routine maintenance activities and the frequency at which they should be performed. Recommendations shall include NETA MTS recommendations and requirements.
3. Preventative maintenance procedures, including:
   - List of tools and specialist required
   - Maintenance instructions
   - Settings, clearances and adjustment data
   - Re-commissioning instructions
4. Preservation instructions with procedures and precautions to be taken in the event of prolonged shutdown
5. Recommended lubricants and capacities (as applicable)
6. Detailed drawings & photos of all equipment and internals to allow for maintenance Schedule of safety critical high integrity interlocks and control circuits.

Parts Catalogue

1. Table of contents for section
7. Complete nomenclature of all parts of all equipment
8. Replacement parts lists with complete nomenclature and part numbers of all replaceable parts, and part drawings

9. Contact information for suppliers and instructions for ordering replacement parts
10. Contact information for authorized service centers
11. Any special handling or storage procedures required for spare parts.
12. All other data pertinent to procurement procedures
13. Copy of all guarantees and warranties issued

Quality Documentation, Miscellaneous

1. Table of contents for section
14. Factory test and calibration certificates, test reports, and QA documentation.

3.0 SUBMITTAL PROCEDURE

3.1 Coordination of Submittals

Drawings and other engineering data for the specified Work are essential to the design, construction, and subsequent ongoing operation and maintenance of the entire Project. The Contractor shall submit drawings and engineering data in accordance with the Contract requirements to assure compliance with the overall construction schedule.

Prior to each submittal, carefully review and coordinate all aspects of each item being submitted. Verify that each item and the submittal for it conform in all respects with the specified requirements and the level of detail required.

3.1.1 Number All Submittals

All Submittals shall possess a unique Contractor document identification number and a revision level.

3.1.2 Grouping of Submittals

Unless otherwise specified, make Submittals in groups agreed to by Owner containing all associated items to assure that information is available for checking each item when it is received

3.1.3 Purpose of Issue

All Submittals not issued for construction shall be marked "Preliminary Issue for Review", "Not for Construction" or with similar identification. Where required for submittal to a Governmental Authority, engineering documents issued for construction shall, to the extent required by such Governmental Authority, be reviewed and stamped by a Professional Engineer registered in the State of Iowa (in the applicable discipline if required).

3.1.4 Timing of Submittal

For submittals not identified in the submittal list, make submittals far enough in advance of scheduled dates for installation and/or inspection and testing to provide time required for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing delivery.

3.2 Submittal Process

3.2.1 Owner's Document Management System Site

All submittals shall be uploaded to the Owner DMS site. The Owner DMS site will have document sub folders. The Contractor shall place submitted documents in the appropriate sub folders, under the direction of the Owner.

All submitted documents shall include the following metadata.

- Title
- Document Number

- Revision Number
- Issue Date
- Document Status

There shall be no duplicate documents on the Owner DMS site. All revised documents shall be uploaded as revisions to the previous version in Owner DMS.

The Owner DMS site will be utilized to carry out the document reviews. Submittals shall be created within the Owner DMS system and the documents shall be linked to the Submittals and issued to the team for review.

3.2.2 Correspondence Distribution

All correspondence shall be identified with the Project name, Correspondence Description, and manufacturer's order number.

Owner and Contractor shall work together to maintain and update the Project correspondence distribution list.

3.3 Submittal Review

Owner reserves the right to review and comment on all documents submitted by Contractor and Subcontractors throughout the Contract period.

For items not listed in the Documents Issue Requirements, attached hereto as the Submittal List Table, Owner shall provide comments to Contractor within ten (10) Business Days of receipt of the Submittal.

For Submittals requiring third party review (e.g., an external utility, City, insurance underwriter, or other governmental authority for review and/or approval for Owner permit), Owner shall expedite said review and include such within a fifteen (15) Business Day cycle.

The Owner's review of each Submittal will cover only general conformity of the data to the Contract Documents. Owner will make a reasonable effort to identify Contract compliance issues and to assist Contractor in identifying issues with dimensions, quantities, and details of the equipment, material, device, or item indicated in the Submittal. However, Owner's review shall in no instance be a means by which the Contractor may assume any relief from the Contract requirements. Contractor must formally submit an Engineering Change Notice request or Project Change Request and receive formal written approval from Owner through the final approved process to modify any Contract responsibilities of the Contractor. Owner's review shall in no way relieve the Contractor from any responsibility for errors or deviations from the requirements of the Contract documents.

Each submittal will be assigned a status by Owner or designated representative using one of the following notations:

- EXCEPTIONS NOTED: The document has comments, revise and resubmit. Work may proceed with incorporation of the changes indicated.
- NO EXCEPTIONS: The document has no comments. Contractor does not need to resubmit the document unless revised. If the document is revised, it shall be resubmitted for review.
- RESUBMITTAL REQUIRED: The document may or may not have comments. This status is primarily used: 1) When the Contractor submittal is "preliminary" or "draft" and requires further work, 2) Major corrections are required. No work shall proceed until the drawing is resubmitted and reviewed. Work performed prior to resubmittal will be at Contractor's risk.
- RECEIVED FOR DISTRIBUTION: The document was received for information. A review has not been conducted and comments have not been made. Work may proceed and Contractor does not need to resubmit the document unless revised.

3.4 Submittal Return Process

A copy of each Submittal reviewed will be returned to the Contractor in the form of an electronic file with the Owner's marking or a marked print, at the option of the Owner.

3.5 Submittal Revisions

When a Submittal is revised, Contractor shall indicate the changes in the document. Drawings shall be revision clouded and labeled with the revision level change. Text documents shall have revision bars in the margin and bold and strikethrough marking in the text. Contractor shall ensure that revised submittals comply with labeling procedures. Owner reserves the right to reject submittals which are non-compliant with revision procedures.

All documents shall have a current revision level indicated on the document. New drawings submitted to the Owner and issued "For Review" shall have Revisions listed alphanumerically. Once issued "For Construction", Revisions shall be listed numerically. The MDL shall be updated as well.

Where the "Document Type" shown in the Submittal List Table is indicated as "Review", the Contractor shall perform all appropriate due diligence in response to all Owner comments and either revise the submittal to reflect specified requirements or provide reasoned response to address the comment for consideration of the Owner. All changes or responses shall be addressed as reflected in or accompanying the next resubmittal. All Contractor's Subcontractor document resubmittals incorporating Owner's comments shall be resubmitted to the Owner upon receipt from the Subcontractor.

Where the "Document Type" shown in the Submittal List Table is indicated as "Information", the Contractor may accept or address Owner comments at their discretion. Ignoring Owner comments on "information" submittals in no way relieves the Contractor of any obligations.

For Review Submittals, no work shall be performed in connection with the fabrication or manufacture of equipment and materials until the Submittals have been reviewed by the Owner except at the Contractor's own risk and responsibility. Work may proceed on equipment and materials when the drawings and data therefore have been returned marked NO EXCEPTIONS or RECEIVED FOR DISTRIBUTION; and when drawings have been returned marked EXCEPTIONS NOTED, provided the Work is performed in accordance with the Owner's notations.

If changes are made to the equipment at the Project Site, revised drawings indicating the changes made shall be submitted to the Owner where indicated in the Submittal List Table.

3.6 As-Built Drawings

Contractor shall make all design documents and other Project records available to Owner as outlined in the Submittal List Table. The as-built documents listed in the Submittal List Table shall be included in Contractor's Master Document List for turnover to Owner in advance of Final Completion. All documents and drawings listed in the Submittal List Table as "As-Built" shall be updated to incorporate all modifications made during manufacture, construction, and startup and commissioning period to reflect actual installed conditions. Final As-Built Drawings listed in the Submittal List Table shall be electronically submitted.

4.0 SUBMITTALS

4.1 Required Project Submittals are identified in Submittal List Table and the Document Turnover List. This list may not be all-inclusive of all submittals required per the Contract and Contract Exhibits. All submittals, and their requirements, called for throughout the Contract and Contract Exhibits shall be provided. Submittal requirements for similar type documents shall be used where not explicitly provided.

4.2 Days in Submittal List Table means business days. Where "Native" format is indicated, files will be submitted in the file format used for their development. For example, all lists will be in MS Excel, all drawings will be in AutoCAD .dwg, documents will be in MS Word, etc.

4.3 Submittals designated as Tier-1 in the Submittal List Table require Owner approval in order to proceed.

TABLE 4.0 - SUBMITTAL LIST

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
1	**PROJECT MANAGEMENT**									
1.1	Project Procedures/ Administration Manual	X		X	Owner DMS	PDF	N/A	N/A	Owner DMS	PDF
1.2	Progress reports	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
1.3	Published meeting minutes & Memorandums	X			Owner DMS	Native	5 days	N/A	Owner DMS	PDF
1.4	Engineering-procurement-fabrication-delivery-erection-construction integrated schedule	X			Owner DMS	Primavera Version 6.2, or newer as required and PDF	10 days	10 days	Owner DMS	.xer and PDF
1.5	Project Execution Plan (see Agreement and Exhibit F for further details)	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
1.6	Quality Plan	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
1.7	Inspection and Test Certificates		X		N/A	N/A	NA	NA	Owner DMS	PDF
1.8	Environmental Compliance Management Plan	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
1.9	Designate engineer of record		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
1.10	Master Document List		X		N/A	Excel	N/A	N/A	Owner DMS	Native
2	**30% ENGINEERING**									
2.1	Site plan layout (Showing all equipment)	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
2.2	Substation General Arrangements	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
2.3	Project One-line Diagrams	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
2.4	Project Design Basis Definition Report (including design criteria)	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
2.5	List of engineering deliverables	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3	**DETAIL ENGINEERING**									
3.1	**GENERAL**									
3.1.1	Equipment receiving, handling, storage and installation instructions and manuals		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
3.1.2	Site plans	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.1.3	Equipment O&M Manuals	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.1.4	Project O&M Manual(s)	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Hard-copy
3.1.5	Inspection and test plans	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.1.6	Performance Guarantee test protocol	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.1.7	Coating Specifications	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.1.8	Painting color samples	X			Mail/Owner DMS	Hard Copy/PDF	10 days	10 days	Hard Copy/PDF	Mail/Owner DMS
3.1.9	Field touch-up procedures of coated surfaces	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.2	**CIVIL / STRUCTURAL DOCUMENTS**									
3.2.1	Corrosion Engineering Report	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.2.2	Geotechnical Report(s)		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
3.2.3	Hydrology and Hydraulics Study Report(s)	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
3.2.4	Site drainage, access, grading and road plans	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.2.5	Concrete mix designs and source and certifications for proposed constituents	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.2.6	Special Inspection Program including Special Inspection plan and Testing plan for pile installation, concrete construction, and anchor bolt installation	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.2.7	Structural steel frame arrangement		X		N/A	N/A	N/A	N/A	Owner DMS	PDF and Native
3.3	**CIVIL /STRUCTURAL DRAWINGS**									
3.3.1	Plot plan with landscaping notes	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.2	Site finish grade	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.3	Site drainage and runoff	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.4	Erosion and sediment control plans	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.5	Underground utility plan and details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.6	Civil Plans and Details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.7	Area and building drainage details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.8	Engineered Equipment foundation drawings	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.9	Miscellaneous plans and sections	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
3.3.10	Concrete and rebar plans, sections and details (excluding fabrication details for rebar)	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.3.11	Site Survey	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.4	**MECHANICAL DOCUMENTS – NOT USED**									
3.5	**MECHANICAL PROCESS FLOW DIAGRAMS WITH MASS BALANCES – NOT USED**									
3.6	**MECHANICAL DRAWINGS**									
3.6.1	Fire Protection/Detection (As Required by AHJ)	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.7	**ELECTRICAL DOCUMENTS**									
3.7.1	Master Device List		X		N/A	N/A	N/A	N/A	Owner DMS	PDF and Excel
3.7.2	Tray Schedule (new/existing identified)		X		N/A	N/A	N/A	N/A	Owner DMS	PDF and Native
3.7.3	Conduit Schedule		X		N/A	N/A	N/A	N/A	Owner DMS	PDF and Native
3.7.4	Cable schedule (including cable routes, cable number, size, length, route, to, from new/existing identified and prefabricated cables identified)	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.7.5	Major equipment list	X			Owner DMS	PDF and Excel	10 days	10 days	Owner DMS	PDF and Excel
3.7.6	Equipment catalog data and specification sheets		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
3.7.7	Electrical load list	X			Owner DMS	PDF and Excel	10 days	10 days	Owner DMS	PDF and Excel
3.7.8	Transformer recommended assembly and filling procedures	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
3.7.9	Electrical Studies (e.g. Short circuit, protective device coordination, arc flash and lightning hazard analysis studies)	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8	**ELECTRICAL DRAWINGS**									
3.8.1	Electrical Substation Plans and Details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.2	Unit Substation Transformers Outline Drawing	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.8.3	Electrical duct bank and grounding plans and details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.4	Underground plans, for all electrical services	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.5	Plans for all demolitions and relocations (If applicable)	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.6	One-line diagrams	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.7	Three-line electrical diagrams		X		N/A	N/A	N/A	N/A	Owner DMS	PDF and Native
3.8.8	Duct banks and manholes		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
3.8.9	Interconnection wiring diagrams		X		N/A	N/A	N/A	N/A	Owner DMS	PDF and Native
3.8.10	Electrical equipment and raceway plans and details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.11	Electrical connection and Schematic Diagrams	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.12	Equipment Installation drawings, vendor		X		N/A	N/A	NA	NA	Owner DMS	PDF
3.8.13	Panel schedules	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
3.8.14	Elementary diagrams	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.15	Grounding grid and grounding details including lightning protection	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.16	Conduit plans	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.17	Cable tray layout and details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.18	Lighting, receptacle, and intercommunications plans and details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.8.19	HVAC electrical, vendor		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
3.8.20	DC systems and UPS system, vendor		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
3.8.21	Motor operator drawings and data		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
3.8.22	Switchgear shop drawings and product literature, vendor	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.8.23	Control panel drawings and data	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.8.24	Cable and wire data, vendor	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
3.9	**I&C DOCUMENTS**									
3.9.1	Instrument list	X		X	Owner DMS	PDF and Excel	10 days	10 days	Owner DMS	PDF and Excel
3.9.2	Alarm List (device, setpoint, action)	X		X	Owner DMS	PDF and Excel	10 days	10 days	Owner DMS	PDF and Excel
3.9.3	Relay Configuration document	X		X	Owner DMS	PDF and Excel	10 days	10 days	Owner DMS	PDF and Excel
3.10	**I&C DRAWINGS**									
3.10.1	Instrument installation details	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.10.2	SCADA Network Diagram	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
3.10.3	SCADA Control Panel Layouts	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
3.10.4	SCADA Architecture/Layout Drawing	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Native
4	**PROCUREMENT**									
4.1	Copy of all Contractor's Equipment Issue for Bid Specification and Procurement Terms and Conditions	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
4.2	Copy of all Contractor's equipment specifications (rev 0 and final rev), letter of award recommendation (unpriced), and subcontracts (unpriced)[1]	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
4.3	Copy of all Contractor's commodity specifications (rev 0 and final rev), letter of award recommendation (unpriced), and subcontracts (unpriced)[2]		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
4.4	Copy of all Contractor's subcontractor specifications (rev 0 and final rev), letter of award recommendation (unpriced), and subcontracts (unpriced)[3]		X		N/A	N/A	N/A	N/A	Owner DMS	PDF

[1] If the Project is awarded on an open book basis, these items will be submitted with pricing until the book is closed
[2] If the Project is awarded on an open book basis, these items will be submitted with pricing until the book is closed
[3] If the Project is awarded on an open book basis, these items will be submitted with pricing until the book is closed

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
4.5	Final recommended spare parts list and pricing	X			Owner DMS	PDF and Excel	10 days	10 days	Owner DMS	PDF and Excel
4.6	List of procurement deliverables	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
4.7	Final special tools list and pricing	X			Owner DMS	PDF and Excel	10 days	10 days	Owner DMS	PDF and Excel
5	**CONSTRUCTION**									
5.1	**CONSTRUCTION DOCUMENTS**									
5.1.1	Construction execution plan	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
5.1.2	Project labor plan		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.3	Project erection plan	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
5.1.4	Field request for information (RFIs) effecting Owner's cost or schedule	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
5.1.5	Construction Turn Over package (TOP)	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF and Hard Copy
5.1.6	Construction permits		X	X	N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.7	Environmental Permits		X	X	N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.8	Completed health and safety file		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.9	Risk Assessments	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
5.1.10	Equipment calibration certificates		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.11	Stormwater Pollution Protection Plan	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
5.1.12	Operational Phase Stormwater Management Plan	X		X						
5.1.13	Visual weld inspection procedures		X		N/A	N/A	N/A	N/A	Owner DMS	PDF

		DOCUMENT ISSUE REQUIREMENTS								
		For Review	**For Information**	**Tier-1**	**Draft Document submitted via**	**Draft Documentation Format**	**Initial Submittal Review Period** (Business Days unless noted otherwise)	**Subsequent Submittal Review Period** (Business Days unless noted otherwise)	**Final and As-Built Document submitted via**	**Final and As-Built Documentation Format**
5.1.14	Mill Test Reports		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.15	List of installed materials		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.16	Raceway installation records		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.17	Field inspection reports		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.1.18	List of construction deliverables	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
5.2	**SITE MANAGEMENT DOCUMENTS**									
5.2.1	Site Specific Safety Plan	X		X	Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
5.2.2	Medical Facility Arrangement		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.2.3	Medical Contingency Plan		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.2.4	Master list for material storage requirements		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.2.5	Emergency cleanup plan		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.2.6	Evidence of Contractor's experience modification factor for worker's compensation insurance (EMR)		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.2.7	Fitness for duty procedure		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.2.8	Security procedures		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.2.9	MSDS documentation		X		N/A	N/A	N/A	N/A	Owner DMS	PDF
5.2.10	Spill prevention plan	X			Owner DMS	PDF	10 days	10 days	Owner DMS	PDF
6	**STARTUP AND COMMISSIONING AND TRAINING**									
6.1	Substation Acceptance Testing Plans	X		X	Owner DMS	PDF and Native	30 calendar days	10 days	Owner DMS	PDF and Native
6.2	Substation Commissioning Plans	X		X	Owner DMS	PDF and Native	30 calendar days	10 days	Owner DMS	PDF and Native
6.3	Acceptance Testing and Commissioning Schedule	X			Owner DMS	PDF and Native	10 calendar days	10 days	Owner DMS	PDF and Native

		DOCUMENT ISSUE REQUIREMENTS								
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6.4	Turn over package (TOP)	X			Owner DMS	PDF and Native	10 calendar days	10 days	Owner DMS	PDF, Native, and Hard Copy
6.4.1	Training materials/manuals	X			Owner DMS	PDF	10 days - deliver to Owner for review 3 months prior to start of commissioning activities or 8 weeks prior to start of training, whichever is earlier	10 days	Owner DMS	PDF and Hard Copy

5.0 DOCUMENT TURNOVER LIST

5.1 General Access and Turnover

Contractor shall make all design documents and other Project records available to Owner as outlined in Exhibit F Attachment 10 instructions. The as-built documents listed in the Submittal List Table shall be included in Contractor's Master Document List for turnover to Owner in advance of Final Completion.

5.2 Specific Submittals

In addition to the general submittals indicated in the previous Article, other specific submittals are identified in the various Sections of the Contract.

5.3 Final Turnover Documents

The following testing and quality documentation must be turned over to the Owner in advance of Final Completion. All documents shall be listed in the Contractor's final Master Document List and shall be organized and turned over into Owner's DMS (and hard copy where indicated in the Submittal List Table).

General Project Information

- Instruction to Contractor Log Book
- Field Change Request Log Book
- Nonconformance Report Log Book
- Complete listing of material test reports and data sheets (CMTRs, other)
- Communications log with Landowners/City/County/State/Other entities
- Punch lists
- All Permits (including documentation for closing any permits)
- Warranty Documents
- Environmental reports during project
- Project contact list, including local officials and stakeholders, and Contractor and Subcontractor supervisory personnel

Collector System

- As-Built GIS shape file
- All Splice Location Information (as applicable)
    - GPS Location
    - Photo
    - Documentation
- Cable Management Detail (reel feet by segment)
- Cable Manufacturer's Datasheets and Test Reports
- Electrical Acceptance Testing Reports
    - Cable Testing & Inspection
    - Transformer Testing & Inspection

    - PCU Testing and Inspection
    - String Testing and Inspection
- Photographs of Pad Mounted / PCU Transformers
    - Oil-Temp, Level, Pressure Gauge Readings
    - HV & LV Terminations
    - Labels
- Photographs of Junction Boxes
    - HV & LV Terminations
    - Labels
- Equipment Manuals, Documentation & Warranty Info
    - Fault Indicators
    - Surge Arrestors
    - Splice Kits
    - T-Bodies
    - Junction Boxes
- As built documentation – One Lines with distances, etc.
- Copies of any electrical tests done (Partial Discharge, HiPot, Resistance, Megger, etc.)
- Completed Collector Energization Procedure

Communication System Fiber Optic (F/O) Cable & SCADA

- As-Built GPS shape file
- All Splice Box Location Information (as required)
    - GPS Location
    - Photo
    - Documentation
- F/O Cable Management detail (reel feet per segments)
- F/O Cable Manufacturer's Datasheets and Test reports
- F/O Acceptance Testing reports
    - Cable Testing & Inspection
    - Communication Equipment Testing & Inspection
- Equipment Manuals, Documentation & Warranty Info
    - Component schematics
    - Component parameters used
    - Ethernet / Fiber Switch
    - Splice Kits
    - Fiber Color designation

    - Fiber Count
    - Fiber Type
- List of All IP addresses with locations and type of equipment
- Documentation on any commercial communications circuits
- UL, CE or other certifications where required for equipment
- The NERC CIP documentation shall be created by Contractor. This includes but is not limited to:
    - Full networking diagram
    - Summarizing, high level network diagram
    - List of BES assets
    - List of cyber assets that if lost, would cause a BES asset to be taken off grid in 15 minutes

Substation

- All Equipment Manuals, Documentation & Warranty Information
- All Equipment Factory Test/Certificates
- All documentation and test reports to prove compliance with NERC requirements
- All documentation and test reports to prove compliance with GIA requirements
- All Initial Equipment field test results
    - Doble
    - Oil results
    - IR
    - Electrical (Megger, Differential, HiPot, Relay. etc.)
- Maintenance & Testing Plan (NERC PRC-005)
- Commissioning & Field Testing Documentation
- Equipment Details & Nameplate Information (NERC FAC-008)
- Relay Setting Worksheets
- Coordination Curves
- As-Left Relay Settings
- Documentation of Protection System Coordination with Transmission Operator
- Tap Changer Control Settings (as required)
- Automatic Voltage Regulator (AVR) Control Scheme Documentation
- Engineering & CAD Drawings (Native Files & PDFs)
- Completed Substation Energization Procedure
- UL, CE or other certifications were required for equipment

6.0 Request For Information (RFI) Process

This guideline describes the formal process to document and control a Request for Information (RFI) and the associated response. A RFI is the means by which Project personnel can make an inquiry for verification, clarification, or direction regarding design documents and construction related issues.

The RFI provides documentation of communications between the Contractor and Owner, and Site personnel regarding Contractor's specification, drawing, and or other design related document interpretation(s), (i.e., verifications, clarifications, directions, etc.).

The RFI may include design documentation (sketches, redlined drawings, procedures, etc.) as a solution to the specific issue raised in the RFI or provide references to other documentation that provides the solution. Engineering, construction, and installation activities must be performed in accordance with approved documents and/or approved design change documents.

Copies of all RFI's shall be provided to the Owner for information.

Any RFI's that result in a variance from the Owner's requirements in the Contract shall not be approved until the Owner first approves the variance.

6.1.1 General Information

RFI submittals and responses shall be via Owner DMS.

The information transmitted on an RFI should be carefully worded and reviewed for compliance to Contract, Drawings, and Specifications. Care must always be exercised in order to avoid conflict with these documents.

6.1.2 Initiating an RFI

When there is a need for design related document interpretation(s), (i.e., verifications, clarifications, directions, etc.), or construction related information beyond what is furnished by applicable Contract and Design Documents, the responsible individual (the originator) will document this need on an RFI.

- The RFI shall be kept to a single subject; however, the originator may attach additional sheets of information clarifying the request as needed.
- Contractor will be required to submit RFIs on behalf of their Subcontractors and vendors of all tiers. RFIs from Subcontractors and vendors will not be accepted.
- The originator will provide the necessary details and reference documents to adequately explain the issue requiring verification and clarification or direction.

If the requested information has any potential impact on the schedule or Contract cost, that information must be clearly indicated on the RFI form.

RFIs shall be answered within five (5) Business Days when practical under the circumstances.

6.1.3 RFI Tracking

The method for submitting the RFI is by posting to the Owner DMS site in standard format including scanned, marked up attachments, as necessary to clarify the RFI. Owner DMS will "Auto notify" the correct parties upon posting by the originator. The Owner DMS website will be used for all formal transmittals in accordance with Project guidelines.

Each party is responsible for maintaining the status of open and closed RFIs. The database will be reconciled on a weekly basis with the RFI originating parties. A summary of the total number of RFIs opened and closed to date will be reviewed on a weekly basis and should be presented in the monthly report.

6.1.4 RFI Resolution

Contractor shall route the proposed RFI resolution via Owner DMS.

6.1.5 RFI Response Distribution

RFI responses will be distributed electronically via Owner DMS.