

SECTION I - TECHNICAL SPECIFICATIONS - SPECIFIC INSTRUCTIONS

TABLE OF CONTENTS

1. SCOPE	1
2. SEQUENCE OF WORK	2
3. CONSTRUCTION DRAWINGS	3
4. SHOP DRAWINGS	4
5. AS BUILT DRAWINGS	4
6. SUBSTATION ACCESS AND SECURITY	4
7. PERMIT REQUIREMENTS	4
8. DEWATERING	4
9. LAYDOWN, SITE ACCESS, & NOISE CONTROL	5
10. CONTRACTOR'S SANITARY FACILITIES	5

TECHNICAL SPECIFICATION - SPECIFIC INSTRUCTIONS

1. SCOPE

1.1. LOCATION OF PROJECT

The address of the JEA Hamilton Street Substation site is 4534 Shirley Avenue Jacksonville, Florida 32210.

1.2. SCHEDULE OF WORK

The Contractor shall prepare the Bid based on the fact the JEA Purchase Order will be fully funded for the JEA FY19 and FY20, which runs from October 1, 2018, to September 31, 2020.

An overall sample project schedule for the completion of the Construction is attached with these Specifications and Drawings, based upon a Contract Award in August 2019.

JEA also has Electric System Security concerns, which require that this Work be completed on time. Therefore, time is of the essence.

1.3. GENERAL DESCRIPTION OF PROJECT

In general, the Scope of Work for the Hamilton Street Substation Breaker 307, 308, 310, 311 & 312 replacements shall include, but not be limited to, the following:

- 1.3.1. Review and adherence to JEA Project Schedule. Obtaining adequate insurances, presenting licenses, and executing a contract with JEA for the construction of the project.
- 1.3.2. Mobilize: Implementation of a Maintenance of Traffic Plan (as required), development and implementation of a Customer Service and Response plan, development and presentation of a monthly project status report (to be presented at substation site), and development and presentation of a Material Receipt, Handling, and Storage plan for approval by JEA.
- 1.3.3. Site surveying, benchmarking, clearing and grading (as required).
- 1.3.4. Site preparation and earthwork (as required).
- 1.3.5. Install control cabling from the substation yard to the control building.
- 1.3.6. Replacement of five (5) oil circuit breakers with vacuum-type breakers including removal/installation of high voltage jumpers and bolted connectors, removal of existing and installation of new control cabling through existing extended (LB or Flex) conduits, and removal of existing and installation of new ground grid conductors to existing ground grid
- 1.3.7. Termination of cables and conductors to equipment, control switchboard panels, and existing ground grid.
- 1.3.8. Cleanup and punch list.

1.4. ENGINEERS OF RECORD

1.4.1. The Substation Engineer for this work is:

Brandy Smith
Project Design 20410
JEA Tower, 9th Floor
21 West Church Street
Jacksonville, Florida 32202
Phone: (904) 665-7987
Cell: (904) 412-2622

1.4.2. The Project Representative for this work is:

Greg Couture
Project Design 20410
JEA Tower, 9th Floor
21 West Church Street
Jacksonville, Florida 32202
Cell: (904) 502-5925

2. SEQUENCE OF WORK

In order to provide an orderly progression of work, the Contractor will be required to coordinate the Work Schedule with JEA forces including the System Operations and Control Center (SOCC), Substation O&M and Relay O&M.

The following is a general representation of a possible Sequence of Work, provided only as an example of one such possible sequence. The Contractor shall be responsible for all work coordination, timing, sequencing, and scheduling that is necessary to assure timely project completion even while working with material suppliers and prevailing circumstances (labor, weather, etc.) that could be expected for this locale and time of year.

2.1. Substation Sequence of Work

2.1.1. Mobilize

2.1.2. JEA forces will perform switching, drain oil from existing circuit breaker, and de-term/label all cables to be removed from the existing circuit breaker.

2.1.3. Remove existing high voltage leads/jumpers, control cable, ground conductor, and above-grade conduits (if needed) to breaker

2.1.4. Remove existing oil circuit breaker & dispose of at JEA's Westside Service Center hazmat building which is located at [6727 Broadway Ave, Jacksonville, Florida 32254. \(904\) 665-6900](#)

2.1.5. Pick-up, transport, and offload to Hamilton Substation site materials, per Materials Furnished by Owner document, from JEA's Commonwealth Service Center which is located at [6674 Commonwealth Ave, Jacksonville, Florida 32254. \(904\) 665-6890](#).

2.1.6. Remove anchor bolts from existing foundation.

2.1.7. Install new vacuum circuit breaker with contractor-provided anchor bolts. NOTE: No structure/major equipment may be installed for more than twenty-four (24) hours unless grounded to the permanent ground grid.

- 2.1.8. Install and terminate ground cables to ground grid.
- 2.1.9. Install jumpers.
- 2.1.10. Extend conduits, pull cable, and terminate at yard equipment which includes vacuum circuit breaker control panel and existing low voltage yard panel(s).
- 2.1.11. Form, lug, and tape the other end of the control cable in the appropriate control house relay panel(s) in preparation for JEA termination. The contractor shall not terminate any cables within the control house.
- 2.1.12. Complete backfilling, compaction, and stabilization of the substation site where required.
- 2.1.13. Install substation rock.
- 2.1.14. Completion of equipment and relay commissioning testing by JEA Forces.
- 2.1.15. Re-energization of the circuit breaker.
- 2.1.16. Site clean-up and disposal of debris.
- 2.1.17. General inspection of the project by JEA Forces.
- 2.1.18. Completion of all punch list items and final adjustments as necessary after Owner inspection.
- 2.1.19. Upon JEA commencing the serving of load but not more than ninety (90) days beyond punch list completion, the Contractor shall inspect all electrical connections for hot spots.
- 2.1.20. Correction of all hot spot locations by the Contractor.
- 2.1.21. Demobilize.

3. CONSTRUCTION DRAWINGS

All Technical Specifications and Drawings that have been provided to the Bidder to allow the Bidder to estimate the Bid for the type, kind, and quantity of work to be performed, as well as the type, qualities, and quantities of materials that must be furnished as a part of this Bid, and are provided solely for Bidding purposes. These Technical Specifications and Drawings are not intended to be used for Construction. Actual Technical Specifications and Drawings for Construction shall be provided no later than the pre-construction conference, at which time if the Contractor can show, in an explicit, formulary way, any direct cost differences between the requirements of the Construction set and the Bid set, JEA will entertain a change order only for that (those) difference(s).

Actual Construction Technical Specifications and Drawings, equipment instruction books, and environmental permits, if applicable, will be furnished to the Contractor as described in the following paragraphs. Furnishing any additional copies that may be required by the Contractor, subcontractor, construction personnel, including copies necessary for securing permits, is the responsibility of the Contractor.

- 3.1. The Owner shall furnish the Contractor two (2) complete sets of Construction Drawings, Specifications, equipment instruction books, and environmental permits, if applicable, for the completion of the work. These two (2) sets will be provided at the Pre-Construction Conference. One (1) set is intended for the Contractor's home office and one (1) set is intended for the Contractor's field office.
- 3.2. The Contractor shall be responsible for the accurate reproduction of the Drawings and Specifications for use by the Contractor, subcontractor, and construction personnel in the completion of this Work, including the

securing of necessary permits to perform the work. The Contractor shall be responsible for all costs incurred in the reproduction of the Construction Drawings and Specifications.

4. SHOP DRAWINGS

- 4.1. The Contractor shall submit Shop Drawings through the Project Representative to the Project Engineers for approval of any Contractor-furnished materials, equipment, or their installation methods. These Shop Drawings may be submitted in the form of drawings, diagrams, illustrations, schedules, or any other form deemed best to convey or illustrate the material, equipment, or installation method to the Project Engineers. The data submitted shall be complete with respect to dimensions, design criteria, materials of construction, etc., to enable the Project Engineers to properly and completely review and evaluate the submittal without unnecessary delays.

5. AS BUILT DRAWINGS

The Contractor is required to provide the Owner with a complete set of "As Built" Drawings. The Contractor's "As Built" field markings shall be accurately transferred to a clean set of Drawings provided by the Contractor. The "As Built" Drawings shall be marked as follows:

Red - Add
Yellow - Delete
Green - Notes to the Engineer

6. SUBSTATION ACCESS AND SECURITY

It will be the responsibility of the Contractor to maintain access to the construction site at all times. In addition, security for JEA equipment and materials must be provided at all times during Construction by the Contractor. Questions about Site Access and Security should be referred to the Project Representative.

7. PERMIT REQUIREMENTS

- 7.1. The Contractor shall adhere to all the requirements of the permits attached with these Specifications and Drawings.

8. DEWATERING

- 8.1. Should groundwater be encountered, the Contractor shall be responsible for utilizing a dewatering system(s) to remove the water from excavations. The Contractor shall comply with all sampling requirements listed in FDEP Dewatering Regulations (FAC 62.621.300) before dewatering can begin. Once the sampling process is complete, the sample(s) results shall be submitted to Jason Compton, JEA, 21 West Church Street, Tower 8, for review and submittal to FDEP. If the sample analysis fails, no dewatering can proceed without further instruction from the JEA Construction Manager. Additionally, prior to any dewatering, the Contractor shall apply for a St. Johns River Water Management District (SJRWMD) Generic Permit for Short Term Dewatering, and comply with all SJRWMD requirements listed on Form No. 40C-22-0590-1.
- 8.2. If the above requirements are not followed, the Contractor shall be held liable for any fines and/or violations incurred by JEA.

9. LAYDOWN, SITE ACCESS, & NOISE CONTROL

- 9.1. The Contractor shall propose and JEA shall approve any area located within the substation fence that shall function as a material laydown area. The laydown area shall be maintained and returned to the original condition by the Contractor immediately after use. The Contractor shall install and maintain temporary fences and gates to secure the designated area. **NOTE:** A suitably constructed and maintained temporary construction fence, when such fence encompasses a closed perimeter, shall be sufficient for the purposes of this Paragraph.
- 9.2. The Contractor shall permit, clear, supply, and install any cribbing, temporary culverts, and any other materials and devices as necessary, to obtain access to the laydown area. The Contractor shall remove the temporary materials and devices and restore the area to original condition after Construction is complete.
- 9.3. The Contractor is required to minimize noise from pumps and other sources and to maintain dust control throughout Construction.

10. CONTRACTOR'S SANITARY FACILITIES

The Contractor shall provide and maintain portalets for personnel use during Construction.