



DATE: 08/11/2020

TO: THE CONTRACTOR
FROM: System Protection & Control Projects 20413
SUBJECT: Scope of Work for Normandy APSTF

Note 1: Any work performed without receiving a written electronic authorization from System Protection & Control Projects 20413 (SPCP), shall result in the contractor not being paid for all work performed without authorization.

Note 2: It shall be the responsibility of the contractor to receive an electronic written authorization from JEA SPCP for any additional work, which may result in a change order.

JEA SPCP Contact Information	
Spencer Hamilton	hamist@jea.com (904)-665-7851 (904)-625-3984
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Note 3: Use this document in conjunction with the following documents:

- Appendix I - NM APSTF SPCP20413 Cable Schedule Rev10 20200811
- Appendix II – NM Breaker & CCVT Replacement Cable Schedule Rev1 20200810
- Appendix III – NormandyPullList_20200805_IFC
- Appendix IV Normandy Substation – APSTF Conduit Schedule
- Appendix V Normandy Substation – Breaker and CCVT Replacement Conduit Schedule
- Normandy_Phasing_Diagrams_20200811
- Normandy DC System Upgrade Drawing Set (Updated 10-1-19)
- Technical Specifications – Civil Structural Architectural
- Technical Specifications – Electrical
- Normandy_Wiring_20200811
- Weekly Report Example

Note 4: THE CONTRACTOR shall follow the instructions below to meet JEA SPCP's expectations. Due to strict system outages, THE CONTRACTOR shall ensure that their crews will be able to mobilize within 48 hours upon receiving notice from JEA SPCP Project Manager.

Note 5: When reviewing the wiring diagrams, please follow the following conventions, WIRING DIAGRAMS BEING PROVIDED ARE FOR ESTIMATION PURPOSES ONLY.

- Anything that is covered in a yellow hatch is considered removed and is not to be terminated into the panel.
- Anything that is done in blue is considered to be a note and is used merely to provide guidance.
- If the wiring diagram is updated at a later point, all changes will be shown in green.

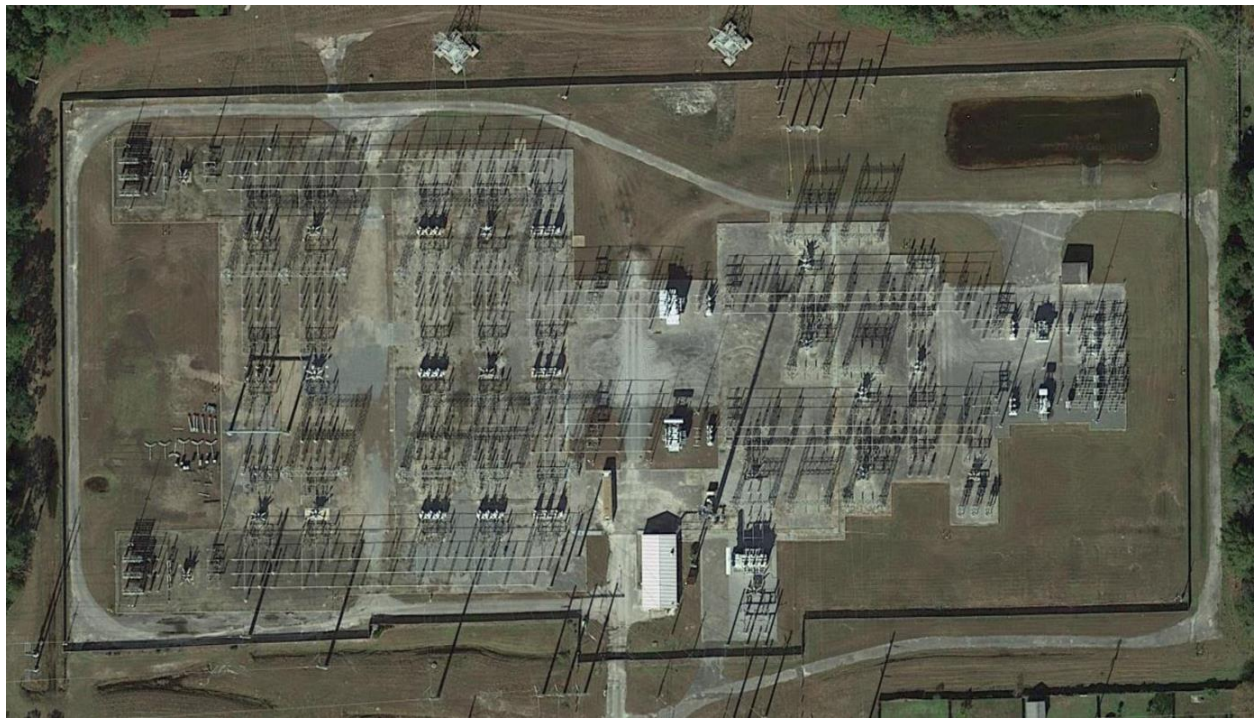
Note 6: All cable to be de-terminated by JEA. The Contractor to only remove cable and panels once clearly marked for removal by JEA and given an authorization by JEA personnel to remove.

Note 7: All material is the property of JEA.

JEA System Protection & Control Projects 20413 (SPCP) is requesting the Contractor to install conduits, comm tray, relocate control house lighting, run yard and control house control cables, provide personnel for onsite outage support, demolish and remove decommissioned relay control panels into the dumpster. Remove the entire length of decommissioned cable (panel to panel and from the control house up to the equipment).

SITE

All work shall be performed at *Normandy Substation (9801 Crystal Springs Road, Jacksonville, FL. 32221).*



JEA POINT OF CONTACT & DEPARTMENT

JEA point of contact and department for this work is:

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SCHEDULE OF WORK

The Contractor shall mobilize after the issuance of Purchase Order (PO) from JEA. The Contractor is to note that this work shall be performed in phases dependent upon electrical outages granted by JEA's System Operations Control Center (SOCC). Therefore, once the outage has been granted by SOCC, The Contractor should have the ability to mobilize within 48-hour notice from JEA Project Manager. Once, the granted outage work has been completed The Contractor may be asked to demobilize until the next outage has been granted. The Contractor shall follow Construction Documents to determine the sequence of work. JEA has Electric System Security concerns, which require that this Work be completed on time. Therefore, time is of the essence.

SEQUENCE OF WORK

The Contractor shall provide all labor to have an orderly progression of this Work. The Contractor will be required to coordinate the Work Schedule with JEA SPCP department, and the point of contact listed above. The Contractor shall be responsible for all work coordination, timing, sequencing, and schedule that is necessary to assure timely completion. Refer to all documentation to get familiarized with the sequence of this work.

TENTATIVE OUTAGE SEQUENCE

The below-listed outage sequence that will be followed for this project. Below sequence is subject to outages being granted by SOCC and could change depending upon system conditions. Also refer to Normandy_Phasing_Diagrams_20200810:

- Line 936
- Cap Bank 9C8
- Cap Bank 9C7
- 230kV North Bus
- 230kV South Bus
- Line 940
- Line 928
- Line 927
- Line 941
- Transformer T7
- Line 835
- Line 838
- Transformer T8
- Line 832
- Line 837
- Cap Bank 8C1
- Breaker 8NS
- Breaker 8T1 (Transformer T1)
- Breaker 8T2 (Transformer T2)
- 138kV North Bus
- 138kV South Bus
- Transformer T6
- Line 921
- Line 944
- Line 947

SUBSTATION ACCESS AND SECURITY

Normandy substation is classified as a NERC CIP Medium site. Due to Normandy being a NERC CIP medium site. The Contractor's employees shall be required to undergo an additional background check through JEA security.

The Contractor shall be required to adhere to all of JEA's security procedures: check-in, arming/disarming, badge access, etc.

SCOPE OF WORK

JEA System Protection & Control Projects 20413 (SPCP) is requesting The Contractor to perform the following tasks for the Normandy substation:

COMM TRAY INSTALLATION

1. The contractor shall install comm tray behind the relay panels as per Normandy DC System Upgrade Drawing Set (Updated 10-1-19)
2. The Contractor shall follow all notes and details as listed in civil/electrical specifications.
3. The Contractor is responsible for providing the Owner with an accurate "As-Built" revision of the Control House Layout for the installation of the comm tray.

CONTROL HOUSE LIGHTING RELOCATION

1. The Contractor shall relocate the existing lighting that will be blocked by the new cable tray system installation
2. The Contractor shall follow all notes and details as listed in electrical specifications.
3. The Contractor is responsible for providing the Owner with an accurate "As-Built" revision of the Control House Layout for the control house lighting relocation.

CONDUIT INSTALLATION

1. The Contractor shall install conduits as per the Appendix IV Normandy Substation – APSTF Conduit Schedule and Appendix V Normandy Substation – Breaker and CCVT Replacement Conduit Schedule.
2. The Contractor shall be responsible for all necessary conduit materials, including fittings and conduits.
3. The Contractor shall be responsible for verification of all conduit lengths.
4. The Contractor shall follow all notes and details as listed in electrical specifications.

CABLE SCHEDULE

1. The Contractor shall pull all cables as listed in Appendix I – NM APSTF SPCP20413 Cable Schedule Rev10 20200811 and Appendix II – NM Breaker & CCVT Replacement Cable Schedule Rev1 20200810. All control cable to be provided by JEA and is already staged on site.
2. The cable will be pulled in stages as per the outage schedule for each device such as breakers, transformers, PT Junction Boxes, etc.
3. The Contractor shall be responsible for verification of all cable lengths and must perform cable length verifications before submitting their bid.
4. The Contractor shall pull all cable as listed in the Cable Schedule.
5. The Contractor shall utilize existing conduits or install new conduits to run cable as per the Appendix IV Normandy Substation – APSTF Conduit Schedule and Appendix V Normandy Substation – Breaker and CCVT Replacement Conduit Schedule.
6. The Contractor shall utilize the new cable tray entrance into the control house for the new cable runs.
7. The cable should have sufficient slack such that they can be terminated to the new Relay Controls Panels and ample cable for making terminations. The cable should have enough slack to reach the floor of the panel and back to the top of the control panel.

8. The Contractor shall leave enough slack in the cable to accommodate for any changes to the Control Panel(s) layout inside the control house.
9. The Contractor shall be responsible for all cable lengths before cutting.
10. The Contractor is responsible for providing the Owner with an accurate "As-Built" revision of the Cable Schedule.
11. The Contractor will be responsible for labeling all cables as listed in the Cable Schedule.
12. All run of control and instrument cable shall be continuous. Splices in control cable shall NOT be permitted.
13. The contractor shall be responsible for terminating yard cable on the de-energized panel end only. Refer to the attached wiring diagrams to obtain an approximate number of terminations.
14. The contractor shall be responsible for labelling, stripping and installing lugs on the cable on equipment end.
15. When running the new cables from the yard to the control house, Contractor shall provide a method to separate the new cable from the existing cables in the cable trench in order to facilitate cable removal by The Contractor.
16. The Contractor shall follow all notes and details as listed in electrical specifications including instructions on labelling of the cable.

CABLE PULL-LIST (Control House Panel to Panel Pulls)

1. The Contractor shall pull all cables as listed cable in Appendix III – Normandy PullList_20200805_IFC. All control cable to be provided by JEA and is already staged on site.
2. Control house panel to panel cables will be pulled in stages as per the outage schedule for each panel. Refer to Cable PullList to get an idea of approximately what cable will be pulled in each phase.
3. The Contractor will be required to adhere to direction from JEA Project Manager for guidance on what cables would be run during each phase.
4. The Contractor shall be responsible for terminating panel to panel cable on the de-energized panel only. Refer to the attached wiring diagrams to obtain an approximate number of terminations.
5. Highlighted cables on the pull-list shall be pulled between the panels, prepped/tie-wrapped, remove insulation, land cable shield, place labels on conductor destinations on both ends, and install lugs on the conductors as needed. The Contractor shall NOT land these cables on terminal blocks without JEA supervision. Cable to be only laded on the terminal blocks once approved by JEA.
6. Ethernet cable, coaxial, and fiber cables will be provided by JEA and shall be run by the contractor list in Appendix III – Normandy PullList_20200805_IFC.

Outage Support

1. The Contractor to provide personnel and equipment on-site for up to four (4) days during the outage for outage support
2. Activities will include support JEA forces and running up-to twenty (20) temporary control house cables.

Panel Demolition

Once the existing panel has been decommissioned the Contractor shall be responsible for removing the decommissioned panels from the control house and discarding in the metal dumpster provided by JEA's investment recovery. Contractor would be responsible for

discarding twenty-one (21) decommissioned panels into the on-site dumpster provided by JEA. Also refer to Normandy_Phasing_Diagrams_20200810.

Cable Demolition

1. The Contractor shall be responsible for removing approximately below number of yard cables per phase:

Outage	Approx. Cables
Line 936	13
Cap Bank 9C8	12
Cap Bank 9C7	12
230kV North Bus	15
230kV South Bus	17
Line 940	13
Line 928	8
Line 927	13
Line 941	10
Transformer T7	21
Line 835	3
Line 838	3
Transformer T8	13
Line 832	3
Line 837	3
Cap Bank 8C1	5
Breaker 8NS	4
Breaker 8T1 (Transformer T1)	3
Breaker 8T2 (Transformer T2)	4
138kV North Bus	10
138kV South Bus	12
Transformer T6	14
Line 921	9
Line 944	11
Line 947	12

2. The Contractor shall remove the entire length of control cable.
3. The Contractor shall be responsible for removing control house panel to panel decommissioned panel.
4. The Contractor shall discard removed cable in the cable dumpster provided by JEA's investment recovery.

Weekly Reports

The Contractor's field superintendent shall be responsible for filling out weekly reporting forms in order to coordinate with JEA's Project Manager. The weekly reports shall be transmitted to JEA's Project Manager via email on Friday EOB.

Investment Recovery

SPCP will be coordinating internally with Investment Recovery Operations (IRO) regarding the proper disposal of the scrap metal and control cable removed from service. All salvageable

material i.e. demoed copper cable, panels, relays, are property of JEA. When the Contractor commences work, there will be two scrap metal containers (one for the scrapped steel and one for the control cable) and it is the Contractor responsibility to perform the following:

1. The Contractor shall be responsible to properly dispose of the scrapped steel into the proper container that is located on-site (JEA will have the containers properly labeled to prevent confusion).
2. The Contractor shall be responsible to properly dispose of the control cable into the proper container that is located on-site (JEA will have the containers properly labeled to prevent confusion).
3. The Contractor shall NOT put any form of trash into the two scrap metal containers that are dedicated for scrap metal and control cable.
4. The Contractor shall be responsible for disposing of all trash that is a byproduct of their work regardless of the trash was created by material that was given by JEA such as empty cable reels.