

Scope of Work

674-14-030

Install Generator Docking Station

Visit site prior to bid in order to be fully acquainted with existing site conditions and scope of work. It is contractor responsibility to **field verify** all existing devices, cables, equipment, measurements, equipment room and areas provided in scope of work. Provide all labor, equipment, materials, tools, and supervision to installation of generator docking stations (total 2) at Building 221-CLC. Verify all cables and generator location before bid this project. Also, this project includes installation of 400A automatic transfer switch, an automatic transfer switch and installation of Government provided 112.5kva transformer.

Installation of the docking station, electrical equipment, cables, 4" rigid conduit, and junction box shall be in according with NFPA 70, 70E and VA specifications.

1. Building 221 – Two 2000A Docking Stations
 - a. Each emergency generator is 500KW generator and has 6 set, 3-400, 400N, 3/0 G, 3" conduit.
 - b. Identify the phase rotation and each generator cable connections at Bldg. 221.
 - c. Provide and install **two** (2) **2,000A** NEAM-#R outdoor switchboard with 2,000A breaker and double lugs (2 – 6 set 500mcm) at button and 1 - 1set 500mcm at top side of breaker including ground lugs and 12 neutral lugs
 - d. Provide and install 6 set, 3-400, 400N, 3/0 G, 3" ridge galvanized conduits and couplings from generator AB to generator docking station approximately 25ft
 - e. AB Generator docking station will be on 12" concrete pad with 2 yellow painted concrete bollards outside mechanical yard.
 - f. Provide and install outdoor junction box at generator AB according with conduits and NFPA 70
 - g. Provide and install 6 set, 3-400, 400N, 3/0 G, 3" ridge galvanized conduits and couplings from generator CD to generator docking station approximately 50ft.
 - h. AB Generator docking station will be on 6" concrete pad inside the mechanical yard.
 - i. Provide and install outdoor junction box at generator CD according with conduits and NFPA 70
 - j. Provide and install UL Listed cold shrink cable termination with compression butt splice at existing generator cable extension.
 - k. Connect each generator docking station cables
 - l. Test the each generator phasing and breaker (Schedule with COR).
2. Provide and install A 400A Automatic Transfer Switch at Building 163
 - m. Provide and install 400A automatic transfer switch with power meter (V, I, PF, W, KVA)
 - n. Install and connect 3-500mcm with 500mcm N and 1/0G in 4" conduit approximately 125 ft from Generator Distribution panel to the transformer room and including core drilling walls.
 - o. Provide and install 400amp I-Line breaker at Generator Distribution
 - p. Connect generator start signal wire
 - q. Remove existing junction box
 - r. Connect existing cable to Automatic Transfer Switch (load feeder and normal power feeder) (weekend connections)
 - s. Test, program, verify and certify the new ATS by manufacture tech

3. Install 112.5kva transformer and disconnects
 - h. Install government provided 112.5kva, 480V/208V transformer on the CMU wall with stand at Basement 163.
 - i. Install wire and EMT conduit for primary and secondary from room BB108 to BB115 approximately 100ft.
 - j. Follow the infection control requirement and above ceiling permit requirement.
 - k. Provide UL Listed red fire rated caulking at all wall penetrations
 - l. Check the phase rotation before and after connection at old transformer and new transformer power.
 - m. Install and connect primary cables (1/0) and secondary cables (500mcm)
 - n. Install NEMA -1, 150A fuse disconnect at 480V transformer.
 - o. Remove existing 112.5kva transformer and power meter from room BB108 (Saturday schedule outage and completed by same day)
 - p. Test and verify primary and secondary voltage and phase rotation
 - q. Disconnect and rearrange the feeder cable at panel in the room during room.