SECTION 26 13 00 - 15 KV LOAD INTERRUPTER SWITCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. The Conditions of the Contract and applicable requirements of Division 1, "General Requirements", and Section 16002, "Electrical General Provisions", govern this Section.

1.2 DESCRIPTION OF WORK:

A. Work Included: Provide 15 kV load interrupter switch work as shown, scheduled, indicated, and as specified.

1.3 STANDARDS:

A. Products shall be designed, manufactured, tested, and installed in compliance with the following standards:

1. ANSI C57.12.28 Pad Mounted Switchgear Assemblies.
2. NFPA-70 Medium Voltage Switchgear.

1.4 QUALITY ASSURANCE:

A. Manufacturers: Provide products complying with these specifications and produced by one of the following:

1. S & C Electric Company.
2. Or approved equal by University of Houston Physical Plant.

B. NEMA Compliance: Comply with applicable National Electrical Manufacturers' Association (NEMA) Standards.

1.5 SUBMITTALS:

A. Shop Drawing submittals shall include, but not be limited to, the following:

1. Manufacturer's product data sheets.
2. Dimensioned drawings of load interrupter switches showing accurately scaled basic units and rough-in information.
3. Furnish, upon request, manufacturer's certification of rating of the basic switch and fusing components and the integrated metal-enclosed interrupter switch assembly.
4. Additional information as required in Section 26 01 00.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. Delivery switches in factory-fabricated water resistant wrapping.

B. Maintain factory-wrapping or provide an additional heavy canvas or plastic cover.

C. Store switches in a clean and dry space and protected from weather.

D. Handle switches carefully to avoid damage to material components, enclosure, and finish.

PART 2 - PRODUCTS

2.1 MATERIALS AND COMPONENTS:

A. General: Except as otherwise indicated, provide load interrupter switch manufacturer's standard materials and components as indicated by his published product information, designed and constructed as recommended by the manufacturer, and as required for a complete installation.

2.2 15 KV METAL-ENCLOSED LOAD INTERRUPTER SWITCHES:

A. General: Provide factory-assembled, outdoor metal-enclosed dead front load interrupter switchgear for use on a 13,200 volt, 3 phase, 3 wire, grounded, 60 Hz system.

B. Enclosure Construction: Switch enclosures shall be Nema 3R and shall be fabricated on die-formed steel base or base assembly, consisting of formed steel and commercial channel welded or bolted together to rigidly support the entire shipping unit for moving on rollers and floor-mounting. The framework shall be formed code gauge steel, rigidly welded and bolted together to support all coverplates, busing, and component devices during shipment and installation.

C. Components:

1. Device shall consist of two 15 kV 600A load interrupter switches with 600A bushing wells for non-load break elbows
2. One 200A fused output switch with 200A bushing wells for 200A load break elbows.
3. 600A copper bussing
4. 14.4 KV nominal voltage
5. 95KV BIL rating
6. 14000 amps short circuit rating
7. Solid Material power fuses for SME-20 Fuse holder.
8. Provide grounding provisions in each compartment, pad, and continuous copper ground bus.
9. Hinged doors
10. Provide fused storage rack
11. Bushing well per ANSI/IEEE Standard 386 (ANSI Standard c119.2).

D. Switch shall be S&C model PME-9 catalogue # 65152R1-C4-Q105 Copper Buss. Provide fuse-unit end fittings for SMU-20 fuses Cat # 3093 and three type SMU-20 fuse units sized per the electrical riser (verify fuse speed and size with UH prior to ordering. Provide all components for complete assembly regardless of catalogue numbers listed.

PART 3 - EXECUTION

3.1 INSTALLATION OF LOAD INTERRUPTER SWITCHES:

A. General: Install switches where shown, in accordance with the manufacturer's written instructions and recognized industry practices, to ensure that the switchgear complies with the requirements and serves the intended purposes.

B. Standards: Comply with the requirements of NEMA and NEC standards and applicable portions of NECA's "Standard of Installation", for installation of switches.

C. Tightness: Torque bus connections and tighten mechanical fasteners.

D. Fuses: Install fuses, of the ratings shown, in the load interrupter switches.

E. Concrete Pads: Install switches on reinforced concrete housekeeping pads. The housekeeping pad shall extend 3" beyond the housing of the switch unless shown otherwise. Furnish the exact position of any block outs, dimensions, and location of the housekeeping pads in a timely manner so as to prevent delay of the concrete work. Refer to Section 26 01 00, "Basic Materials and Methods", for additional requirements.

F. Adjustment: Adjust operating mechanisms for free mechanical movement.

3.2 TESTING:

A. Pre-energization Checks: Prior to energization, check switches for continuity of circuits and for short circuits.

B. Thermographic Testing: Refer to Section 26 01 26, "Electrical Testing", for thermographic testing.

C. Prior to energization of switches, Megger-test phase-to-phase and phase-to-ground insulation resistance.

3.3 IDENTIFICATION:

A. General: Refer to Section 26 05 53 for nameplates, identification and warning signs.

END OF SECTION 26 13 00