

## SECTION 16420 - SERVICE ENTRANCES

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Extent of service entrance work is indicated by drawings and schedules including underground primary conduits and underground secondary conduits and wiring.
- B. Types of service entrance equipment in this section include the following:
  - 1. Panelboards.
  - 2. Transformer secondary connectors (lugs).
  - 3. Meter sockets single or ganged.
  - 4. Circuit breakers.
- C. Refer to other Division 16 sections for wires/cables, raceways, grounding, and electrical boxes and fittings work required in connection with service entrance equipment.

## 1.3 SUBMITTALS:

- A. Product data: Submit manufacturer's data on service entrance equipment and accessories.

## 1.4 QUALITY ASSURANCE:

- A. Codes and Standards:
  - 1. Electrical Code Compliance: Comply with applicable local code requirements of the authority having jurisdiction and NECs applicable to installation and construction of service entrances.
  - 2. UL Compliance: Comply with construction and installation requirements of the following UL standards for service entrance equipment and accessories:
    - a. UL 50: Electrical Cabinets and Boxes
    - b. UL 489: Molded Case Circuit Breakers and Circuit Breaker Enclosures.
    - c. UL 869: Electrical Service Equipment.

## 1.5 DELIVERY STORAGE & HANDLING

- A. Store service entrance equipment in original packaging and protect from weather and construction traffic. Whenever possible, store indoors; where necessary to store outdoors, store above grade and enclose with watertight wrapping.

## PART 2 - PRODUCTS

### 2.1 PANELBOARDS

- A. General: Provide service entrance equipment in NEMA 3R enclosure and accessories; of types, sizes, ratings and electrical characteristics indicated:
  - 1. General Electric
  - 2. Siemens ITE
  - 3. Square D
- B. Circuit Breakers: Except as otherwise indicated, provide circuit breakers and ancillary components, of types, sizes, ratings and electrical characteristics indicated.

### 2.2 METER SOCKETS

- A. General: Provide meter sockets that comply with requirements of the local utility company supplying electrical power to service entrance equipment of building project.
- B. 34-gang meter bank shall be Square D, type EZM or approved equal with 3-pole main circuit breaker, 3-phase house meter, and 2-pole, single-phase main circuit breaker at each tenant meter space. Provide ampere ratings indicated on the drawings.
  - 1. Each tenant modular meter section shall be three-phase incoming with single-phase meter sockets, horizontal buss rated 800 amperes minimum.
  - 2. House modular meter section shall be three-phase incoming with three-phase meter, horizontal buss rated 800 amperes minimum.
  - 3. Listed and labeled as suitable for use as service equipment.
  - 4. Fully rated for use on systems capable of delivering short-circuit currents of 42,000 symmetrical amperes.
- C. Provide 320-ampere continuous rated, self-contained meter socket suitable for underground service applications for existing office building.

### 2.3 CABLES/WIRES

- A. General: Provide cables/wires complying with Division 16 Basic Electrical Materials and Methods section "Conductors and Cables."

- B. Raceways: Provide raceways complying with Division 16 Basic Electrical Materials and Methods section "Raceways." The following raceways shall be used:
  - 1. Rigid Steel Conduit and Fittings.
  - 2. PVC Schedule 40 conduit and fittings.
  - 3. EMT conduit and fittings.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine areas and conditions under which service entrance equipment and components are to be installed.

#### 3.2 INSTALLATION OF SERVICE ENTRANCE

- A. Install service entrance equipment as indicated, in accordance with equipment manufacturer's written instructions, and with recognized industry practices, to ensure that service entrance equipment fulfills requirements. Comply with applicable installation requirements of NEC.
- B. Include \$20,000 allowance for CMP service installation backcharges.

END OF SECTION 16420