

## **SECTION 16471**

### **PANELBOARDS**

#### **PART 1 - GENERAL**

##### **1.01 WORK INCLUDED**

- A. Furnish and install circuit breakers into panelboards as indicated on the Drawings.

##### **1.02 REFERENCE DOCUMENTS**

- A. The Special Provisions for electrical work are hereby made a part of this Section of the Work. Refer to Section 16010.
- B. See Section 16190 for Supporting Devices.

##### **1.03 SUBMITTALS**

- A. Submit complete manufacturer's specification data on each type of circuit breaker, including Manufacturer, trip and type, proposed to be furnished.
- B. Submit a complete description and listing of devices proposed for each existing panelboard.

##### **1.04 QUALITY ASSURANCE**

- A. Circuit breakers shall be listed by Underwriter's Laboratories, Inc., UL-50-1974 UL-67-1979, for the service to be performed and shall bear the UL label.
- B. Circuit breakers shall be constructed in accordance with the applicable NEMA PB1-1977 Standards for Panelboard Construction.

#### **PART 2 - PRODUCTS**

##### **2.01 DEVICES**

- A. Circuit breakers shall have overload tripping in each pole. Multi-pole breakers shall open all poles simultaneously on manual operation and overload of any pole. Circuit breakers shall have magnetic arc blowout coils and shall be trip free and trip indicating with quick-make, quick-break mechanism.
- B. Circuit breakers shall be provided with high pressure type solderless lugs for the proper size and type to accept the feeder cables.

- C. Branch panelboards on 208/120V systems shall be equipped with G.E. Type THQB; Square D Type QOB; or Westinghouse Type BAB bolt-in circuit breakers with a minimum interrupting capacity of 10,000 amperes symmetrical on 120VAC, 60 Hertz. Where indicated on panelboard schedules higher interrupting capacities shall be furnished.
- D. Branch panelboards on 480/277 systems shall be equipped with G.E. Type TED; Square D Type EHB or Westinghouse Type GHB bolt-in circuit breakers with a minimum interrupting capacity of 14,000 amperes symmetrical on 277 VAC, 60 Hertz. Where indicated on panelboard schedules higher interrupting capacities shall be furnished.
- E. All panelboards shall have solid copper buss bars.

## **PART 3 - EXECUTION**

### **3.01 INSTALLATION**

- A. Install circuit breakers in accordance with manufacturer's published instructions.
- B. Arrange for raceways and conductors to enter panelboards only in factory recommended locations and to avoid excessive build-up of conductors in any area of the cabinets.
- C. Conductors shall be trained to their points of connection, labeled with their circuit numbers, and bound securely with ties between the lug connections and the raceway entries to the panelboard.
- D. Install spare conduits from each panelboard. Where ceiling above is furred down, stub three 3/4" conduits from each panel to an accessible space above the ceiling. Where ceiling is exposed, stub three 3/4" conduits up and turn out at the ceiling. Where there is ceiling space or crawl space below, stub three 3/4" conduits to below in a similar manner.

### **3.02 LABELING**

- A. Provide a neatly, typewritten directory of circuits for each existing panelboard as indicated for additions or modifications.

**END OF SECTION**