



## **SECTION 26 24 16 - PANELBOARDS**

### **PART 1 – GENERAL**

#### **1.1 SUMMARY**

- A. Section includes distribution and branch circuit panelboards rated 800A and below. For distribution boards rated greater than 800A use switchboard construction.

#### **1.2 SUBMITTALS**

- A. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, circuit breaker and fusible switch arrangement and sizes.
- B. Product Data: Submit catalog data showing specified features of standard products.
- C. Submit shop drawings after Short Circuit and Overcurrent Protective Device Coordination Study is approved. Shop drawings without approved study will be returned and not reviewed.
- D. AIC ratings shown on the single line diagrams are approximate values only. The AIC ratings of all submitted equipment must conform to the approved Short Circuit and Overcurrent Protective Device Coordination Study.
- E. The electrical contractor shall submit ¼”=1’0” scale drawings including interior elevations of all electrical rooms and areas including actual dimensions of all equipment in electrical rooms and indicate clearances per NEC, as well as door swings or other obstacles. These drawings shall be submitted along with or prior to shop drawing submittals. Shop drawing submittal without sketches will be returned and not reviewed. The equipment depicted on the plans and interior elevations shall match the equipment indicated on the shop drawings.

#### **1.3 QUALIFICATIONS**

- A. The manufacturer of the panelboard shall be the same manufacturer of the major components within the assembly, including circuit breakers and fusible switches.

#### **1.4 MAINTENANCE MATERIALS**

- A. Furnish two of each panelboard key. Panelboards keyed alike to LAWA’s current keying system.

### **PART 2 - PRODUCTS**

#### **2.1 DISTRIBUTION PANELBOARDS**

- A. Manufacturers:



1. **Cutler-Hammer.**
2. **GE Electrical.**
3. **Square D.**

- B. Product Description: NEMA PB 1, circuit breaker type panelboard.
- C. Panelboard Bus: Copper, current carrying components, and furnish copper ground bus in each panelboard.
- D. Enclosure for outdoors installation: NEMA 3R Stainless Steel, NEMA 4 or better.
- E. Minimum integrated short circuit rating: Amperes rms symmetrical shall be 42,000A rms symmetrical. Panelboards shall be fully rated; series rated equipment is not acceptable. The short circuit rating of the equipment shall exceed 130% of the available short circuit current at the equipment.
- F. Molded Case Circuit Breakers: NEMA AB 1, circuit breakers with integral thermal and instantaneous magnetic trip in each pole. Furnish circuit breakers UL listed as Type HACR for air conditioning equipment branch circuits.
- G. Circuit Breaker Accessories: Trip units and auxiliary switches.
- H. Cabinet Front: Surface door-in-door type, fastened with screws, hinged door with flush lock, metal directory frame, finished in manufacturer's standard gray enamel – NC16.

## 2.2 BRANCH CIRCUIT PANELBOARDS

- A. Manufacturers:
  1. **Cutler-Hammer.**
  2. **GE Electrical.**
  3. **Square D.**
- B. Product Description: NEMA PB1, circuit breaker type, lighting and appliance branch circuit panelboard.
- C. Panelboard Bus: Copper, current carrying components. Furnish copper ground bus in each panelboard with full sized neutral; furnish insulated ground bus.
- D. For non-linear load applications subject to harmonics furnish 200 percent rated, plated copper, solid neutral.
- E. Minimum Integrated Short Circuit Rating: 10,000 amperes rms symmetrical for 208 volt panelboards; 14,000 amperes min, rms symmetrical for 480 volt panelboards. Panelboards shall be fully rated; series rated equipment is not acceptable. The short circuit rating of the equipment shall exceed 130% of the available short circuit current at the equipment.
- F. Molded Case Circuit Breakers: NEMA AB 1, bolt-on type thermal magnetic trip circuit breakers, with common trip handle for all poles, Type HACR for air conditioning equipment circuits, Class A ground fault interrupter circuit breakers. Do not use tandem circuit breakers.



- G. Cabinet Box: 6 inches deep, 20 inches wide for 240 volt and less panelboards, 20 inches wide for 480 volt panelboards. Surface mounted.
- H. Cabinet Front: Flush or Surface cabinet, concealed hinge, metal directory frame, and flush lock keyed alike. Finish in manufacturer's standard gray enamel. No concealed trim clamps.

### **PART 3 – EXECUTION**

#### **3.1 INSTALLATION**

- A. To the extent possible, install all panelboards indoors due to the corrosive environment.
- B. Install panelboards plumb.
- C. Install recessed panelboards flush with wall finishes.
- D. Height: 6 feet to top of panelboard; install panelboards taller than 6 feet with bottom no more than 4 inches above floor.
- E. Install filler plates for unused spaces in panelboards.
- F. Provide typed circuit directory for each branch circuit panelboard. Refer to LAWA standard before revising directory to reflect circuiting changes to balance phase loads.
- G. Install engraved nameplates per LAWA standards.
- H. Ground and bond panelboard enclosure. Connect equipment ground bars of panels in accordance with NFPA 70.

END OF SECTION 26 24 16