PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

A. Extent of panelboard, load-center, and enclosure work, including cabinets and cutout boxes, is indicated by drawings and schedules.

B. Types of panelboards and enclosures in this section include the following:

1. Power-distribution panelboards.

2. Lighting and appliance panelboards.

C. Refer to other Electrical work sections for cable/wire, connectors and electrical raceway work required in conjunction with panelboards and enclosures; not work of this section.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

A. Manufacturers: Subject to compliance with requirements, provide products of one of the following (for each type of panelboard and enclosure):

   General Electric Company
   Siemens
   Square D Company
   Cutler-Hammer

2.02 PANELBOARDS:

A. General: Except as otherwise indicated, provide panelboards, enclosures and ancillary components, of types, sizes, and ratings indicated, which comply with manufacturer's standard materials, design and construction in accordance with published product information; equip with number of unit panelboard devices as required for complete installation. Where more than one type of component meets indicated requirements, selection is Installer's option. Where types, sizes,
or ratings are not indicated, comply with NEC, UL and established industry standards for applications indicated.

B. Power Distribution Panelboards: Provide dead-front safety type power distribution panelboards as indicated, with panelboard switching and protective devices in quantities, ratings, types and with arrangement shown; with anti-turn solderless pressure type main lug connectors approved for copper conductors. Construct unit for connecting feeder at top or bottom of panel to suit application. Equip with copper bus bars, and full-sized neutral bus; provide suitable lugs on neutral bus for outgoing feeders requiring neutral connections. Provide molded-case main and branch circuit breaker types for each circuit, with toggle handles that indicate when tripped. Where multiple-pole breakers are indicated, provide with common trip so overload on one pole will trip all poles simultaneously. Provide a bare uninsulated grounding bar suitable for bolting to enclosure. Provide panelboards fabricated by same manufacturer as enclosures, and which mate properly with enclosures. Provide an additional isolated ground bar for panels serving isolated ground outlets.

C. Lighting and Appliance Panelboards: Provide dead-front safety type lighting and appliance panelboards as indicated, with switching and protective devices in quantities, ratings, types and arrangement shown; with anti-turn solderless pressure type lug connectors approved for copper conductors; construct unit for connecting feeders at top or bottom of panel as arrangement requires; equip with copper bus bars, full-sized neutral bar, with bolt-in type heavy-duty molded case circuit breakers; provide suitable lugs on neutral bus for each outgoing feeder required; provide bare uninsulated grounding bar suitable for bolting to enclosure; and provide panelboards fabricated by same manufacturer as enclosures, and which mate properly with enclosure. Provide panels for 208Y/120-Volt or 480Y/277-Volt service as determined for the use. Provide an additional isolated ground bar for panels serving isolated ground outlets.

D. Panelboard Enclosures: Provide galvanized sheet steel cabinet type enclosures, in sizes and NEMA types as indicated, code-gage, minimum 16-gauge thickness. Construct with multiple knockouts and wiring gutters. Provide fronts with adjustable indicating trim clamps, and doors with flush locks and keys, all panelboard enclosures keyed alike, with concealed door hinges and door swings as indicated. Equip with interior circuit-directory frame, and card with clear plastic covering. Provide baked gray enamel finish over a rust inhibitor. Design enclosure for recessed or surface mounting as indicated. Provide enclosures fabricated by same manufacturer as panelboards, and which mate properly with panelboards to be enclosed. Provide panels for 208Y/120-Volt or 480Y/277-Volt
service as determined by the use. Wet location panelboards shall be NEMA 4 enclosures.

E. Panelboard Accessories: Provide panelboard accessories and devices including, but not necessarily limited to, cartridge and plug time-delay type fuses, circuit breakers, ground-fault protection units, etc., as recommended by panelboard manufacturer for ratings and applications indicated. Provide extra gutter space; split-bus; contactor space; and circuit breaker arrangement to accommodate the energy management system described in other specifications. Provide suitable enclosure space to accommodate time clock; relays; contactors and control items as shown on the drawings. The separate space shall be under a separate door located at the top of the panel with locking provisions.

PART 3 - EXECUTION

3.01 INSTALLATION OF PANELBOARDS:

A. General: Install panelboards and enclosures where indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in compliance with recognized industry practices to ensure that products fulfill requirements.

B. Coordinate installation of panelboards and enclosures with cable and raceway installation work.

C. Anchor enclosures firmly to walls and structural surfaces, ensuring that they are permanently and mechanically secure.

D. Provide electrical connections within enclosures.

E. Fill out panelboard's circuit directory card upon completion of installation work. Directory shall be type written.

F. Provide a minimum of 6-each empty 3/4" conduits stubbed out above ceiling from all recessed panelboards.

END OF SECTION 26 24 16