

**CI-0703****TAB 7: TECHNICAL DISCIPLINES**

Electrical

PANELBOARDS

Shall be flush or surface mounted as required, complete with hinged locking door and flush catch, and finished with corrosion-resistant primer, equipment gray. Surface mounted panelboards shall be installed on unistrut galvanized steel framing channels with 75mm clear between back of panelboard and wall. Where practical, panelboards shall be grouped in proximity.

Panelboard shall be copper bus type, with full capacity solid neutral design and sequence style bussing, composed of an assembly of bolt-in-place moulded case circuit breakers with thermal and magnetic trip and trip-free position separate from either the “ON” or “OFF” positions. Multi-pole circuit breakers shall have common simultaneous trip.

Overcurrent devices feeding emergency equipment shall be located only in electrical equipment rooms, and fitted with breaker locking devices.

Provide 30% spare breakers in panel; Allow for 30% spare Amp capacity and spaces in each panel.

Panel boards shall be provided with type-written directories indicating loads controlled by each circuit installed in metal framed clear acetate cover, affixed to the inside cover of the panel board.

SWITCHGEAR

All components at the completed assembly shall be CSA approved and bear a CSA label.

Dimensional Coordination: Verify that dimensions of switchgear do not exceed spaces provided.

Construction and Ratings

Use arc-resistant, metal-clad switchgear, free standing, dead-front steel structure. Vendor shall provide details describing that arc-resistant testing of equipment.

The switch gear assembly shall be suitable for bolting each cell to steel rails embedded in concrete floor of a substation building.

Sheet steel barriers shall be provided between the vertical units and between the control compartments and the power compartments.

The switchgear shall be suitable for the future additions of units at each end.

A copper ground buss shall be installed for the entire length of switchgear, affording connection to all units and equipped with solderless #2/0-4/0 cable connectors at each end. Bus material to be copper, silver plated.

For outdoor units provide waterproof and tamper proof equipment.