1 General

1.1 Panelboards shall be U.L. listed and labeled.

1.2 Each panelboard shall have its own main disconnecting means. In most cases this will be a main breaker or molded case switch.

1.3 In general, panelboards shall be located in electrical equipment rooms or other equipment rooms designed for such.

1.3.1 These rooms shall be accessible by qualified personnel only and have corresponding signage stating such.

1.4 Panelboards shall not be located in corridors or other areas of public access.

1.5 Panelboards shall not be used as the Main distribution Panel

1.6 Integrated panelboard assemblies are not acceptable for projects at Purdue University.

1.7 The engineer of record should verify the available fault current at each panel to ensure that the interrupting rating of the breakers (as specified) is adequate.

2 Approved Manufacturers

2.1 Siemens

2.2 Square D

2.3 G.E.

3 Branch Circuit Panelboards - Lighting or Power 225 amps and less

3.1 208Y/120 volt and 120/240 volt panelboards

- Be not less than 20" wide.
- Circuit breakers to be bolt on type
- All breakers (Main and Distribution) shall be fully rated. Series connected rated systems are not acceptable
- Buss bars to be silver or tin plated copper
- 15 and 20 amp trip curves should be as recommended by the AFC (Arc Flash Consultant).
- Breakers need to indicate tripped condition by a means other than the off position
- Have a hinged-to-box (tub), front door construction. Panelboards shall require the use of two things to access energized parts; a key to open the panel door that exposes the breakers as well as the screws securing the panelboard front and a hand held tool (screwdriver) to open the cover that exposes energized parts.
- Panelboards with 30 or more branch circuits shall have a minimum of two door latches for each door
- Panelboards shall be equipped with 20% spare breakers of each size. A/E shall note that it is not the intention of this guideline to provide an extra panelboard just to meet the requirement for 20% spare breakers

3.2 480Y/277 volt panelboards.

- Be not less than 20" wide
- Circuit breakers to be bolt on type
- All breakers (Main and Distribution) shall be fully rated. Series connected rated systems are not acceptable
- Buss bars to be silver or tin-plated copper
- 15 and 20 amp trip curves should be as recommended by the AFC (Arc Flash Consultant).
- Breakers need to indicate tripped condition by a means other than the off position
- Have a hinged-to-box (tub) front door construction. Panelboards shall require the use of two things to access energized parts; a key to open the panel door that exposes the breakers as well as the screws securing the panelboard front and a hand held tool (screwdriver) to open the cover that exposes energized parts.
- Panelboards with more than 30 branch ccts. Shall have a minimum of two self latching locks for each door.
- Panelboards shall be equipped with 20% spare breakers of each size. A/E shall note that it is not the intention of this guideline to provide an extra panelboard just to meet the requirement for 20% spare breakers

4 Power Panelboards (PP) - Power greater than 225 amps

4.1 Circuit breaker panelboards to be equal in construction to Square D I-line style or Siemens P4 and P5 series.

4.2 Fusible panelboards to be equal to Sq. D. QMB or Siemens, VB6 series.

4.3 Shall have copper bus with silver or tin plating for phase, neutral and ground conductors
4.4 Conform to industry standard temperature rise ratings as tested by an independent laboratory.

4.5 All breakers (Main and Distribution) shall be fully rated. Series connected rated systems are not acceptable.

4.6 Under 1200 amp panels to have a hinged-to-box (tub) front door construction.

4.7 Each panelboard’s wiring gutter shall be a minimum of the manufacturer’s standard gutter width plus the following:

- 225 A. and below – Standard gutter width.
- Greater than 225 A. through and including 400 A., Standard gutter width plus an additional 4” on each side.
- Greater than 400 A. through and including 800 A., Standard gutter width plus an additional 6” on each side.
- Greater than 800 A. through and including 1200 A., Standard gutter width plus an additional 6” on each side up to a maximum panelboard width of 46” (for a single section tub).

4.8 Alternative methods

4.8.1 Increasing the wiring gutter cross sectional area by adding depth to the tub.

4.8.2 Increasing the overall wiring gutter cross section area by adding a factory manufactured wiring gutter extension of the same height and depth as the panelboard tub.

5 Warranty

5.1 Warranty shall be the standard factory warranty from the date of purchase or from installation and shall include all parts, labor, travel and other expenses.

5.2 The Engineer of Record shall investigate pricing for an extended warranty and make recommendations to the owner.

6 Documentation

6.1 In addition to the standard Owner's Manual requirements, the project specifications shall require that a separate electronic copy (in PDF format), of the certified factory drawings shall be sent to the University Senior Electrical Engineer.