Pikes Peak REGIONAL Building Department

ELECTRICAL PLAN REVIEW REQUIREMENTS

ALL PLANS REQUIRE:

- Compliance with currently adopted IECC, NEC and ANSI 117.1
- Colorado professional engineer's stamp per RBC 106.1.3
- Scale and format per RBC106.1.1 (1/8" = 1'-0" minimum scale and 1/8" minimum lettering)
- Grid lines and column lines coinciding with architectural pages.
- Accessibility Plan – this does not need to be part of the electrical drawing set. See https://www.pprbd.org/File/Resources/Downloads/Codes/Policy%20-%20Accessibility%20Plan%20-%20RBC106.1.pdf
- Hardwired appliances and utilization equipment must be listed by a Nationally Recognized Testing Laboratory (NRTL).
- One-line diagram (see below for requirements)
- Panel schedules (see below for requirements)
- Floor plan (see below for requirements)

ONE-LINE DIAGRAM

- Conduit/conductor size, type, and quantity, beginning at the utility transformer, to include all conductors in the chain of supply for the electrical equipment in the scope of work
- All electrical equipment in the electrical distribution system clearly labeled as New, Existing, or Future.
- Feeder schedule – this is required on each one-line diagram. For schedules showing conductor sizes in CU and AL, the type of conductor (either CU or AL) must be specified for each conductor.
- Feeder and Main Breaker over current device size (ampacity) showing compliance with 215.10, 230.95 and 517.17 NEC.
- 240.87 NEC compliance including verification that the method chosen to reduce clearing time is set to operate at less than the available arcing current.
- Manufacturers list of series rated components for all series rated designs.
- Multi meter services must include a list of secondary enumerated addresses on the one-line.

FAULT CURRENT

- Fault current information (SCA, SCCR, AIC) must be included, in tabular form, for all new and re-fed electrical equipment including; panel boards, switchboards, service equipment, transfer equipment, elevator control panel, fire pump control panel, industrial control panels, air conditioning and refrigeration equipment. See terms and methodologies below.

SERVICE SWITCHBOARD AND PANEL SCHEDULES

- All information must be supplied and verified by the engineer at the time of plan submittal.
- Disconnect and panel size.
- Volt amps for all branch circuit, feeder and service loads.
- Equipment that requires rear or side access must be identified on the equipment schedule and floor plan per 408.18(C) NEC.

FLOOR PLANS

- Footprint (site plan) showing all electrical service equipment and disconnects serving the structure.
- Location of all electrical equipment.
- Equipment that requires rear or side access must be identified on the equipment schedule and floor plan per 408.18(C) NEC.
- Panel and circuit designation on all electrical equipment (New and Relocated).
- Elevator pit and machine room detail showing all required circuits and disconnects.
- Patient care areas must show compliance with 517.13 and 517.61(C) NEC.
- Light fixture schedule including fixture type and lamp wattage.
- Accessible units must be clearly identified.
- Dimension and partition of all meeting rooms per 210.65 NEC

FAULT CURRENT TERMS AND METHODOLOGIES

- AIC – Ampere Interrupting Capacity
- SCA – Available Short Circuit Current
- SCCR – Short Circuit Current Rating
- At panel boards and switchboards AIC and SCAR are required.
  - ⇒ For SCA that exceeds AIC, let-through current of current limiting fuses is not allowed for mitigating the excess fault current. Current limiting fuses are allowed as part of a tested combination to series rate the system to mitigate the excess fault current.
- At transfer equipment, industrial control panels, elevator control panels, fire pump control panels, air conditioning and refrigeration equipment SCA and SCCR are required.
  - ⇒ For transfer equipment, industrial control panels, elevator control panels, fire pump control panels, air conditioning and refrigeration equipment current limiting fuse let-through current is acceptable to mitigate SCA that exceeds SCCR if fuse type is matched to fuse size and SCA per manufacturer's current-limitation charts.

SEE ELECTRICAL EQUIPMENT SCCR AND FUSE PROTECTION DOCUMENT ON THE WEBSITE
https://www.pprbd.org/File/Resources/Downloads/CommercialHandout/Electrical%20equipment%20SCCR%20and%20protection.pdf