



## **County of Prince George, Virginia**

*“A welcoming community • Embracing its rural character • Focusing on its prosperous future”*

### **Requirements for Commercial Electrical Plans**

The following checklist contains the minimum information and details required on electrical plans prior to submission for plan review. This is a basic pre-submittal checklist that is intended to expedite the plan review process by minimizing the number of required revisions. Review these items and ensure that your plans are complete prior to submission.

#### **General Requirements**

- ❑ Construction documents for electrical systems are required to be prepared and sealed by a registered design professional for occupancies of groups: I (institutional), E (educational) and H (high hazard) that have an occupant load over 100. Additionally, construction documents for electrical systems are required to be prepared and sealed by a registered design professional for all buildings over 3-stories in height, or any electrical installation exceeding 600 volts or 800 amps. Construction documents for electrical systems that are not required to be prepared by a registered design professional must be prepared by a licensed master electrician, or a licensed, class A, electrical contractor. The name, phone number, address and occupation of the person that prepared the construction documents must be printed on the construction documents.
- ❑ The RDP seal and signature or master card number and signature must be on the plans.
- ❑ All pages of the plan set shall be neat and legible and of the same size. If different discipline designers use different page sizes, have smaller pages re-printed on sheets the size of the largest in the set. Electrical plans shall be submitted on the same size sheets as the other plans in the building permit package.
- ❑ Provide the Electrical code edition used for design. The current code edition is the 2014 NEC.
- ❑ Clearly distinguish new work from old work.
- ❑ Make sure all spaces and rooms are labeled as to their use.
- ❑ Clearly identify each sheet with distinct sheet numbers.
- ❑ Drawings need to be at least 1/8” scale or larger.
- ❑ Indicate locations of all wet and hazardous locations.

## **Electrical Service**

- ❑ Show location of meter and CT cabinet on floor plans.
- ❑ Show location of service equipment.
- ❑ Size service conductors, raceways, specify raceway type.
- ❑ Indicate AIC rating of service equipment and all panel boards.
- ❑ Show all fuse and breaker sizes.
- ❑ Indicate amperage, voltage and phase of service equipment.

## **Grounding Details for Service**

- ❑ Show grounding electrode system and details.
- ❑ Size all grounding conductors.

## **Panel boards**

- ❑ Provide panel boards schedule with connected loads and breaker sizes.
- ❑ Indicate if panel boards are main lug or main breaker type.
- ❑ Indicate AIC rating.
- ❑ Indicate panel boards, voltage, phase, rating in amps and name of panel.

## **Feeders**

- ❑ Show wire size and type.
- ❑ Show conduit size and type.
- ❑ Show feeder loads.
- ❑ Indicate size of equipment grounding conductor

## **Branch Circuit Details**

- ❑ Designate all branch circuits serving power, lighting and equipment.
- ❑ Show all wiring sizes, conduit sizes and number of conductors.

## **Transformers**

- ❑ Indicate size in KVA.
- ❑ Indicate primary and secondary voltages.
- ❑ Show overcurrent protection.
- ❑ Show location of transformer on drawing.
- ❑ Indicate size of grounding electrode conductor.

## **Disconnects and Starters**

- ❑ Show location of all disconnects and starters on plans.
- ❑ Show size and type (fused or non-fused).
- ❑ Indicate fuse size.
- ❑ Show location of all electrical equipment on plans.
- ❑ Show loads of equipment on panel schedules.

## **Egress and Exit Lighting**

- ❑ Show location of all exit and egress lights on plans.
- ❑ Indicate lighting circuit that they are supplied from.
- ❑ Show breaker lock on panel schedule if using the exception in Article 700.

## **Demand Load Summary**

- ❑ Show connected loads of new and existing electrical system.
- ❑ Indicate NEC demand loads per Article 220.
- ❑ Indicate if demand loads are being calculated from the standard or optional methods.