City of Long Beach
Department of Development Services
Building and Safety Bureau

Guideline for Electrical Plan Review Submittal

Information Bulletin

BU-015

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The purpose of this Information Bulletin is to provide a quick reference guide to inform applicants what type of information is required on the electrical plans to file for an electrical plan review. The information outlined below is applicable to most electrical projects. Some construction projects may not require all of the information listed, while others may require additional information. Please consult with the appropriate Development Permit Center staff for assistance. The following minimum requirements for submittal of electrical plan review are as follows:

PLAN STANDARDS

A complete set of electrical plan is essential so that Development Permit Center staff can perform a technical review of the project with minimal delay. To assure that plans submitted are readable and of sufficient size, please comply with the following minimum standards:

1. All plans shall be legible. Faint pencil drawings, faint carbon copies, and faint blueprints are not acceptable.
2. The background shall be as light as possible and of uniform density.
3. The size of each sheet of the plans is limited to a minimum of 18” x 24” and a maximum of 36” x 48”.
4. The minimum lettering size is 1/8”.

PLAN SUBMITTAL

1. Provide two (2) scaled copies of all electrical plans.
2. All electrical plan sheets must be stamped and signed by the Responsible Party. Responsible Party shall mean a registered design professional licensed in the State of California in the following area(s): Electrical Engineer, Civil Engineer, Architect or Design/Build Electrical Contractor.
3. If applicable, all State of California required Title 24 documents, signed by the Responsible Party, shall be included on the plans.
4. Provide a complete and accurate Development Services Permit Application.

PLAN RESUBMITTAL

1. Provide two (2) scaled copies of the corrected electrical plans.
2. All electrical plan sheets must be stamped and signed by the Responsible Party.
3. Include one (1) copy of the most recent electrical plan review comments/corrections.
4. Include one (1) copy of a response letter addressing all plan review comments/corrections.

PLAN REVISION (changes to previously approved plans)

1. Provide one (1) copy of all previously approved/stamped electrical plan sheets.
2. Provide two (2) scaled copies of all revised electrical plans.
3. All electrical plan sheets must be stamped and signed by the Responsible Party.

4. "Cloud and Delta" all revisions on the electrical plans and provide a complete and up to date "revision" block.
5. Provide a complete and accurate Development Services Permit Application.

GENERAL INFORMATION REQUIRED ON ELECTRICAL PLANS

1. Indicate the project address on the electrical plans.
2. Submit a separate plan check application for permitting of each separate building.
3. Provide a site plan.
4. Indicate the use of each room and/or area.
5. The design professional shall indicate, via plan note(s) or distinctive symbology, which wiring methods (as described by the Chapter 3 of the California Electrical Code (CEC)) are acceptable at any/all locations (e.g., dry and wet locations, concealed in walls, above ceilings, in slab on grade, underground, exposed, etc.). Include all "low voltage," if applicable.
6. Indicate the scale used on the drawings.
7. Provide a complete symbol legend showing all symbols used in the drawings. Indicate switch and receptacle heights per CEC.
8. Provide a complete luminaire schedule, include lamp type, wattage, voltage, make and model, etc.
9. Provide luminaire-mounting details.
10. Provide a plan note stating all installed equipment shall be listed and approved by a City of Long Beach approved testing laboratory.
11. Clarify the scope of work. Indicate all work as being either new or existing.
12. Provide complete panel schedules for all distribution equipment with new and/or modified loading.
13. Provide complete CEC service and feeder calculations for all distribution equipment with new and/or modified loading or utilize Article 220.87 of the CEC. If the later method is employed, provide all pertinent documentation from the serving utility or recorder on the plan sheets.
14. Show all movable or relocatable partitions, office modules, and office furnishings that contain electrical wiring, include all lighting and receptacles.
15. Show all raceways, conductor quantities, equipment, outlets, devices, luminaires, etc. on the plan view(s). Indicate raceway and conductor sizes for all runs greater than ½" and/or #12 AWG conductors.
16. Adjacent to all outlets, luminaires, equipment, homeruns, etc., indicate source, circuit, switchleg designations, etc.
17. Provide complete elevation details of all switchgear.
18. Indicate the types and burial depths of all underground raceways/cables.
19. If applicable, provide a complete kitchen equipment schedule including all pertinent electrical information for all equipment and/or appliances.
    a. Indicate the location of all equipment and/or appliances on the electrical power plan via flag notations or other approved means.
    b. Include all Type 1 Hood exhaust and make up air interlock controls, fire suppression control panel(s) and under hood lighting and control.
    c. Include a complete Type 1 Hood control schematic drawing.

GENERAL INFORMATION REQUIRED ON ELECTRICAL PLANS (Cont.):

20. Provide the following two electrical plan notes:
    a. Via separate submittal, obtain all required permits, inspections and approvals for all fire alarm system installations and/or modifications from the Long Beach Fire Department's Fire Prevention Bureau.
    b. Via separate submittal, obtain approvals and permits for all electrical subsystems with power supply(s) capable of producing more than 50VA and/or 25V (e.g., security, telco/data, PA, audio/visual, HVAC controls, etc.).
21. If emergency egress lighting is required by the California Building Code (CBC) or National Fire Protection Association (NFPA), comply with all of the following:
    a. Indicate the path of egress on the electrical plans.
    b. Provide illuminated exit signs complying with the CBC or NFPA requirements.
    c. Provide an emergency power source for exit signs and egress path lighting.
    d. PROVIDE THE FOLLOWING NOTE ON THE ELECTRICAL PLANS:
    Test for illumination and exit signs, including directional exit signs powered by either the normal premises wiring or any additionally required emergency systems shall be conducted in the presence of the building inspection staff to ensure compliance. The test times for emergency systems shall be arranged in advance and all staffing cost associated with either pre-hours or after-hours shall be paid at this time. The testing and approval of such systems shall occur prior to the issuance of a Temporary Certificate of Approval or final approval of the project.

    Approved Date: _____ *Approved by:* _____

MINIMUM INFORMATION FOR SINGLE LINE SCHEMATIC DRAWING:

Provide a complete single line schematic drawing, including but not limited to the following:

1. Indicate all conductor sizes, types, and approximate lengths.
2. Indicate the short circuits withstand/interrupting rating of all switchboards, panels, overcurrent protective devices, etc.
3. Indicate the electrical ratings of transformers (include transformer impedance percentage), buss, overcurrent protective devices, motors, multi-motor assemblies, etc.
4. Show all grounding and bonding, including grounding electrode conductor sizes, grounding electrode(s) to be utilized, termination locations of all grounding electrode conductors, main and system bonding jumpers, etc.
5. Provide all pertinent "available fault current" (AIC) information and supporting documentation from the serving utility on the plan sheets and design accordingly or design all for a minimum of 42KAIC (in either case, show all fault current calculations throughout).
6. Callout the available fault current at each pertinent location of the single line.
7. If a series rated system is to be installed, include all information below:
    a. Indicate the series combination interrupting rating of all overcurrent devices. Identify on the plan, the fuse class and circuit breaker manufacture, model designation, type and electrical rating used as part of the series rating.
    b. Provide a plan note stating the requirement to install a cautionary label on the rated device cover stating "Caution – Series Rated System _____Amps Available."

8. Provide voltage drop calculations for all conductors.
9. Indicate the length of all transformer secondary conductor runs.

MINIMUM INFORMATION REQUIRED WHEN LOCATED IN HAZARDOUS AREAS:

1. Designate all hazardous areas by class and division as defined in the CEC.
2. Provide plan and elevation view(s) showing boundaries of all hazardous locations.
3. If declassification of hazardous areas is dependant upon mechanical ventilation, provide all pertinent justification and calculations.