



City of Carmel-by-the-Sea  
Building Safety Division  
Standard Operating Guidance (SOG)

## 19-13 Electrical Permits – Low Voltage Lighting/Irrigation Systems

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### Background

The City of Carmel-by-the-Sea adopts by reference the CA Electrical Code (CEC) as specified in CCR Title 24. The CEC prescribes requirements for the installation of low-voltage electrical lighting and irrigation systems under Article 411. Such systems are typically used in the landscaping and yard lighting situations. They are generally powered by a branch circuit from the 120 vac. electrical system contained in the building(s) on the premises.

### Citations

California Code of Regulations (CCR), Title 24, Part 3 California Electrical Code  
CCR Title 16, Division 8, Article 3, Classifications – C-7 Low Voltage Systems Contractor  
City of Carmel-by-the-Sea Municipal Code (CMC), Title 15, Chapter 15.36 Electrical Code  
2019 CA Electrical Code Art. 110, Requirements for Electrical Installations  
2019 CA Electrical Code Art. 411 – Lighting Systems Operating at 30 Volts or Less

### Guidance

While many consider low-voltage electrical systems as fairly benign, in most cases they are directly connected to a buildings power system, often as a branch circuit with its own breaker and connection to a building electrical panel. Improper connections and installations of the low voltage system can and do cause fires, injuries, and deaths. Consequently, the CEC in Article 411 prescribes requirements for low-voltage systems.

System requirements include system listing and assembly requirements; location requirements; and cable and burial depth requirements contained in Table 300.5, Column 5.

Effective immediately, all low-voltage electrical lighting and irrigation systems regulated under Art. 411 shall require an electrical permit from the City. Permit applications must include a diagram of the wiring system beginning at the service panel to which the system is connected and extending to the last, most distant, luminaire or irrigation control valve on the system. The electrical plan must specify the type of cable used, the proposed depth of bury, and any proposed conduit/raceway. In addition, the application materials must include the manufacturer's cut sheets and specifications on the luminaires, transformers, controllers, and fixtures, fittings conductors or other components demonstrating that the components are listed as system, and that the assembly of the listed parts will comply with the listing requirements.

The CA State Licensing Board also requires that contractors installing such systems have, at a minimum, a C-7 low voltage electrical contractors license prior to performing the work. Licensing requirements shall be verified at the time of permit issuance.

In most cases, plan reviews and permitting of these systems may be expedited through the City's *Permit by Appointment* program, or may be submitted for normal review and approval.