



## Residential Energy Storage System Permit Application Guidelines

For information on Permit Applications and the County’s InSite Public Portal please use the following link

<http://sccbbuilding.org/>

### CA Electrical Code

**Definition of ESS - Energy Storage System (ESS).** *One or more components assembled together capable of storing energy for use at a future time. ESS(s) can include but is not limited to batteries, capacitors, and kinetic energy devices (e.g., flywheels and compressed air). These systems can have ac or dc output for utilization and can include inverters and converters to change stored energy into electrical energy.*

**To schedule a Building inspection** please use the [Mobile Inspection App](#), [Insite Public Portal](#), or call 408-299-3161 and leave a voicemail

### Planning and Development Permit Center

70 W Hedding Street  
East Wing, 7th Floor  
San Jose, CA 95110  
Phone: (408) 299-5770

### GENERAL

- Complete a [Development Service Intake Form](#) (permit application)
- Plan review fees are required at the time application and plan submittal
- Permit fees are due after the plans are approved and prior to issuing the permit
- Plans shall be minimum 11"x17"" to maximum 24" x 36"
- Drawings shall be signed by the architect or engineer(s), or by the contractor (electrical C-10) or by the owner who designed and will install the system
- Provide a cover sheet with a description of the project scope, occupancy type, and applicable codes
- Job Address, owner’s name, address, and phone number
- Engineer, contractor, or design professional’s name, phone, address, and license number

### ELECTRICAL

- All ESS are required to be listed to UL 9540 CRC R327.2
- Provide a site plan sheet showing the locations of all structures and proposed equipment
- For interior locations provide a detailed layout with required working clearance dimensions CEC 110.26
- Provide a line diagram that shows the premises wiring system (all electrical equipment, types and sizes of raceways and conductors, overcurrent protection device ratings (breakers)
- Provide clear color photos of the main electrical service panel with the dead front cover in place and removed. Include a photo of the (E) service equipment label to show the ampacity rating of the equipment. Provide a spec sheet for new electrical service equipment
- Provide spec sheets for all proposed equipment (installation instructions may be required as needed)

### STRUCTURAL

- For equipment with an aggregate weight over 400lbs or equipment over 20lbs with center of mass located 4ft above the floor or grade level provide stamped and signed anchorage and/or attachment details from a licensed Civil/Structural engineer.

### FIRE/RESIDENTIAL CODE

- ESS Shall be installed in the following locations: (R328.4) Outdoors or on the exterior side of exterior walls located not less than 3 feet from doors and windows directly entering the dwelling unit and not below or above any emergency escape and rescue openings. (Santa Clara County Ordinance No. NS-1000.136) Provide a complete elevation that clearly indicates the location of doors and windows on the exterior wall where the ESS shall be mounted/installed.

**FIRE/RESIDENTIAL CODE (continued)**

- Rooms and areas within dwelling units, basements, and attached garages in which ESS are installed shall be protected by smoke alarms in accordance with Section R314. A listed heat detector shall be installed in locations within dwelling units and attached garages where smoke alarms cannot be installed based on their listing. Activation of the heat detector shall provide audible notification at the sleeping areas. CRC R328.7

NOTE: Dwellings equipped with a residential fire sprinkler system with an audible alarm that can be heard 15db above ambient in sleeping areas may satisfy the requirement for heat detection and notification.

- Individual ESS units shall be separated from each other by at least three feet except where smaller separation distances are documented to be adequate based on large-scale fire testing complying with section 1206.1.5 (CFC 1206.11.2.1). R328.3.1
- Individual ESS units shall have a maximum rating of 20 kWh. The aggregate rating of the ESS shall not exceed: 40 kWh within utility closets, basements and storage or utility spaces 80 kWh in attached or detached garages and detached accessory structures 80 kWh on exterior walls 80 kWh outdoors on the ground. If the ESS exceeds the permitted individual or aggregate rating, it shall be installed in accordance with Section 1206.1 through 1206.9 of the California Fire Code. (R328.5)
- ESS installed in a location subject to vehicle damage in accordance with Section R328.8.1 or R328.8.2 shall be provided with impact protection in accordance with Section R328.8.3  
Garages R328.8.1 Where an ESS is installed in the normal driving path of vehicle travel within a garage, impact protection complying with Section 1207.11.7.3 shall be provided. The normal driving path is a space between the garage vehicle opening and the interior face of the back wall to a height of 48" above finished floor. The width of the normal driving path shall be equal to the width of the garage door opening. Impact protection shall also be provided for ESS installed at either of the following locations:
  1. On the interior face of the back wall and locations within 36" to the left or to the right of the normal driving path.
  2. On the interior face of the side wall and located within 24" from the back wall and 36" of the normal driving path.
    - Exception: Where the clear height of the vehicle garage opening is 7'-6" or less, ESS installed not less than 36" above finished floor are not subject to vehicle impact protection requirements.
- Other Locations subject to vehicle impact. R328.8.2 Where an ESS is installed in a location other than as defined in Section R328.8.1, and is subject to vehicle damage, impact protection shall be provided in accordance with Section R328.8.3.
- Impact Protection Options R328.8.3 Where ESS is required to be protected from impact in accordance with Section R328.8.1 or R328.8.2, such protection shall comply with one of the following:
  - Bollards constructed in accordance with one of the following:
    - 1.1 Minimum 48" in length by 3" in diameter schedule 80 steel pipe embedded in a concrete pier not less than 12" deep and 6" in diameter, with at least 36" of pipe exposed, filled with concrete and spaced at a maximum interval of 5'. Each bollard shall be located not less than 6" from an ESS.
    - 1.2 Minimum 36" in height by 3" in diameter schedule 80 steel pipe fully welded to a minimum 8" by ¼" thick steel plate and bolted to a concrete floor by means of 1 ½" concrete anchors with 3" minimum embedment. Spacing shall be not greater than 60", and each bollard shall be located not less than 6" from the ESS.
    - 1.3 Pre-manufactured steel pipe bollards shall be filled with concrete and anchored in accordance with the manufacturer's installation instructions, with spacing not greater than 60" and each bollard shall be located not less than 6" from the ESS.



CRC R328.8.1 FIGURE R328.8.1 ESS VEHICLE IMPACT PROTECTION

