

SOLAR PHOTOVOLTAIC & STATIONARY STORAGE BATTERY INSTALLATIONS



The required plans and permits for installing a solar photovoltaic (PV) or stationary storage battery (SSB) system vary according to the type of property and the type of energy system.

In all cases: Rooftop PV panels and SSB equipment must be installed to minimize visual impacts and comply with development standards set forth in [Municipal Code Title 20](#).

INSTALLATIONS ON SINGLE-FAMILY, DUPLEX, AND TOWNHOME PROPERTIES

For single-family, duplex, and townhome properties, you may download the building permit at www.SJPermits.org for qualifying projects as listed below. If the project does not meet all listed qualifications, then go to “All Other PV/SSB Projects” on page 2.

PROJECTS THAT QUALIFY FOR A PERMIT FROM SJPERMITS.ORG

PV Projects	SSB Projects
<ul style="list-style-type: none"> • Must be a rooftop installation. • Total panel weight including frame is less than 5 pounds per sq. ft. • Maximum concentrated load at each point of support is less than 40 pounds. • Maximum height above the roof surface is 18 inches. • PV panels are not ballasted. 	<ul style="list-style-type: none"> • The project uses a City-approved anchorage detail as shown on pages 3-4 of this bulletin; OR • The project uses an approved SSB Masterfile for bracket anchorage, on file with the City’s Building Division. Construction documents matching the approved Masterfile must be provided to the City Inspector at the time of inspection. <p>In all cases an inspection of the bracket anchorage is required. For most systems, the anchorage must be inspected <u>before</u> the batteries are installed.</p>

TO SCHEDULE AN INSPECTION

At www.SJPermits.org click the Inspection Scheduling button or call the Permit Center at **408-535-3555** for assistance.

IF YOUR PROJECT NEEDS A . . .

Planning Permit
call 408-535-3555

Public Works Permit
call 408-535-3555

Fire Department Plan Review call 408-535-7750

VIEW CURRENT CODES

- [California Building Code](#)
- [California Electrical Code](#)
- [California Fire Code](#)
- [California Residential Code](#)
- [City of San José Municipal Code Title 24](#)
- [Applicable UL Product Standards](#)

Development Services Permit Center

San José City Hall - 1st FL
200 E. Santa Clara St.
San José, CA 95113
408-535-3555

INSPECTION PROCESS & REQUIREMENTS - The City Inspector will review the electrical plan at the project site on the day of inspection. Requirements are as follows:

- The PV system is a rooftop installation on R-3 occupancies (single-family, duplex, or townhome) that are not more than three stories above grade plane and constructed in accordance with the California Residential Code.
- Unless supplemented or modified in Chapters 5 through 7 of the California Electrical Code, Chapters 1 through 4 shall apply to Solar PV and Energy Storage Systems.
- Installed equipment is required to be listed and labeled according to applicable UL standards. Installers must provide evidence that equipment is appropriately listed/labeled and meets the code required UL standards at the time of inspection.
- The manufacturer’s installation instructions for all installed equipment shall be available at the time of inspection.
- Minimum working space shall be provided at electrical equipment.
- All conductor sizes must be the required minimum and may be upsized at the contractor’s discretion.
- Conduit sizing is confirmed at time of inspection. Conduit fill calculations shall be provided when requested by the field inspector.
- Conductor ampacity adjustments and/or correction factors for number of current-carrying conductors and ambient temperature is verified at time of inspection. Site specific calculations shall be shown on plans and be provided to the field inspector at the time of inspection.
- A minimum temperature correction factor of 1.12 (temperature coefficient) shall be used to calculate the maximum photovoltaic source and output circuit voltage.
- The calculated maximum voltage for the PV source and output circuit shall be less than the maximum input voltage and/or rating of the connected equipment.
- The calculated photovoltaic system voltage shall not be greater than 600 volts.

INSTALLATIONS FOR ALL OTHER PV/SSB PROJECTS

PV/SSB projects on all other types of properties will apply for a permit using the appropriate service at www.sanjoseca.gov/BuildingPermitServices:

- **Condominium properties and non-qualifying projects on single-family, duplex, or townhome properties** - Use the [Residential Permit Service](#).
- **Non-residential projects** - Use the [Commercial Permit Service](#).

APPLICATION SUBMITTAL REQUIREMENTS

In all cases, you must submit a [Building Permit Application](#) with plans that include:

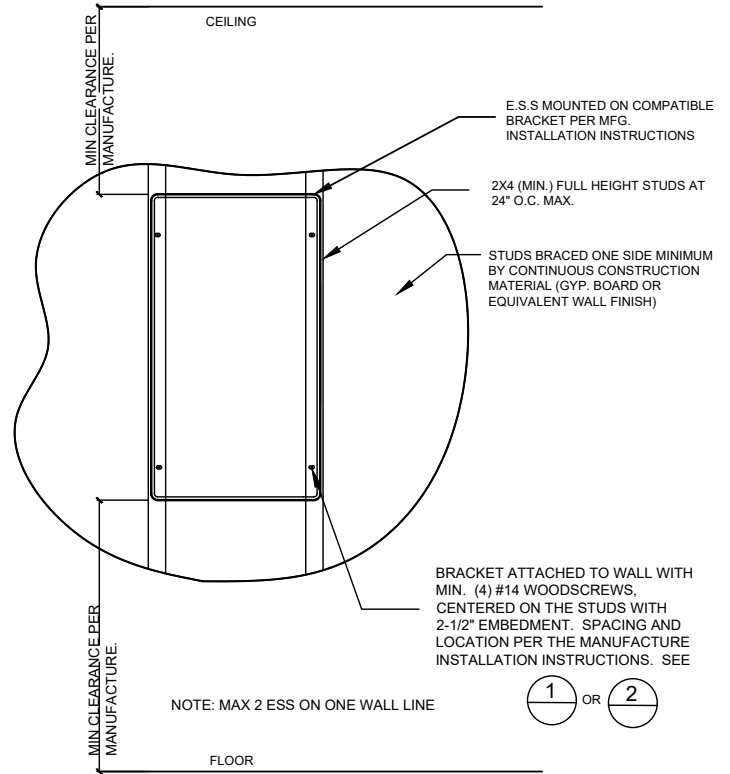
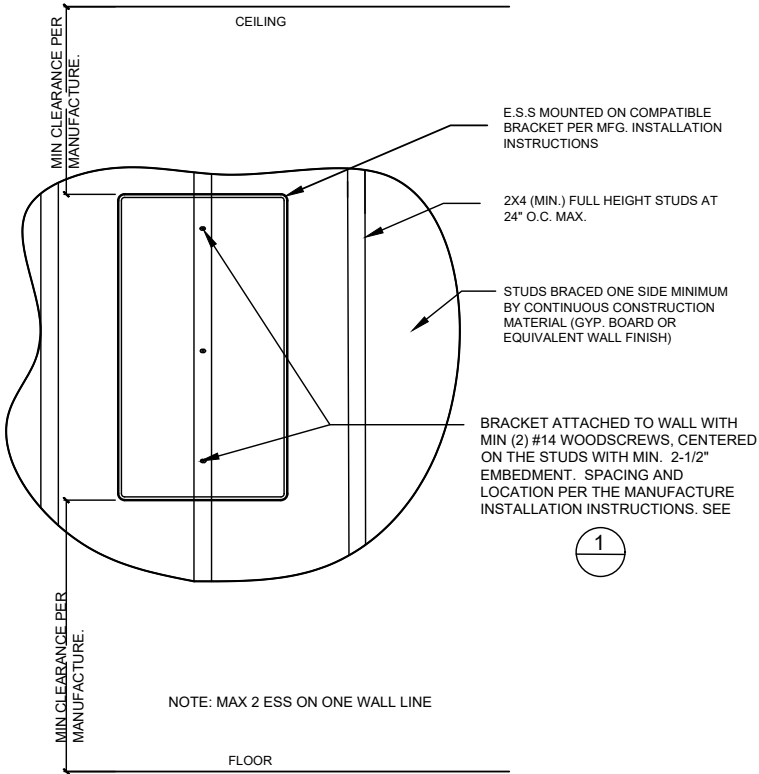
- Site Plan - Show the building footprint, location of the PV panels and/or SSB equipment, and locations of photovoltaic and utility interconnection point.
- Building Plans - Show:
 - Framing plan that shows and specifies existing and new framing/support.
 - Details of anchorage, interconnection of elements, and weather proofing of roof perforations.
 - Structural calculations verifying capacity of proposed systems to resist vertical and lateral loads as expressed in [Bulletin #265-Equipment Suspended or Mounted on Roofs, Floors or Walls](#).
 - PV non-ballasted installations need to specify the method of mechanical attachment to supporting structural elements. Structural elements include, but are not limited to, roof rafters, trusses, purlins, beams, and blocking. Plywood sheathing and spaced sheathing are not considered structural members.
- Electrical plans - Show:
 - System configuration and location of modules, array, and equipment including location of Balance of System.
 - Conduit sizes and routing; location of disconnecting means; and required overcurrent devices.
 - Short circuit current and show and summarize open circuit voltage.

OTHER PERMITS MAY BE REQUIRED

- **PV projects not located on a rooftop require a Planning Permit.** During [Planning's Phone Service Hours](#), call 408-535-3555 (press 1 and press 1 again) and ask to speak with a planner. Ask the planner for instructions on how to proceed.
- **PV/SSB projects that use the public right-of-way require a Public Works Permit.** If the installation will temporarily occupy right-of-way space, trenching, or underground boring in the right-of-way, then you need a [Public Works Permit](#). Call 408-535-3555.
- **PV/SSB projects on a commercial or multifamily (3 or more units) property require plan review by the Fire Department.** The Fire Department reviews plans for compliance with guidelines issued by the California State Fire Marshall. Call 408-535-7750.

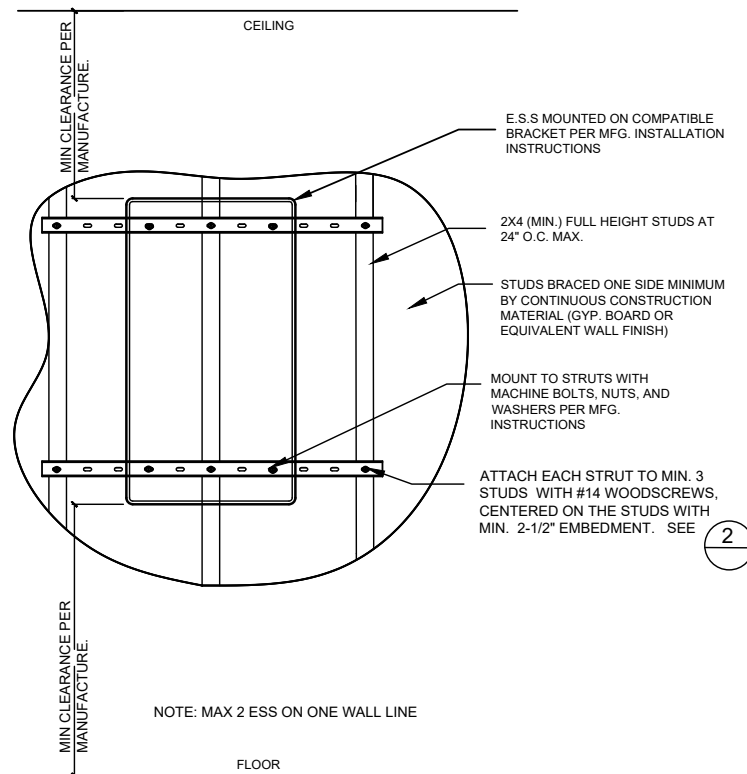
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ESS CSJ BRACKET DETAILS



A UP TO 200 LBS E.S.S. ON SINGLE STUD
SCALE: NTS

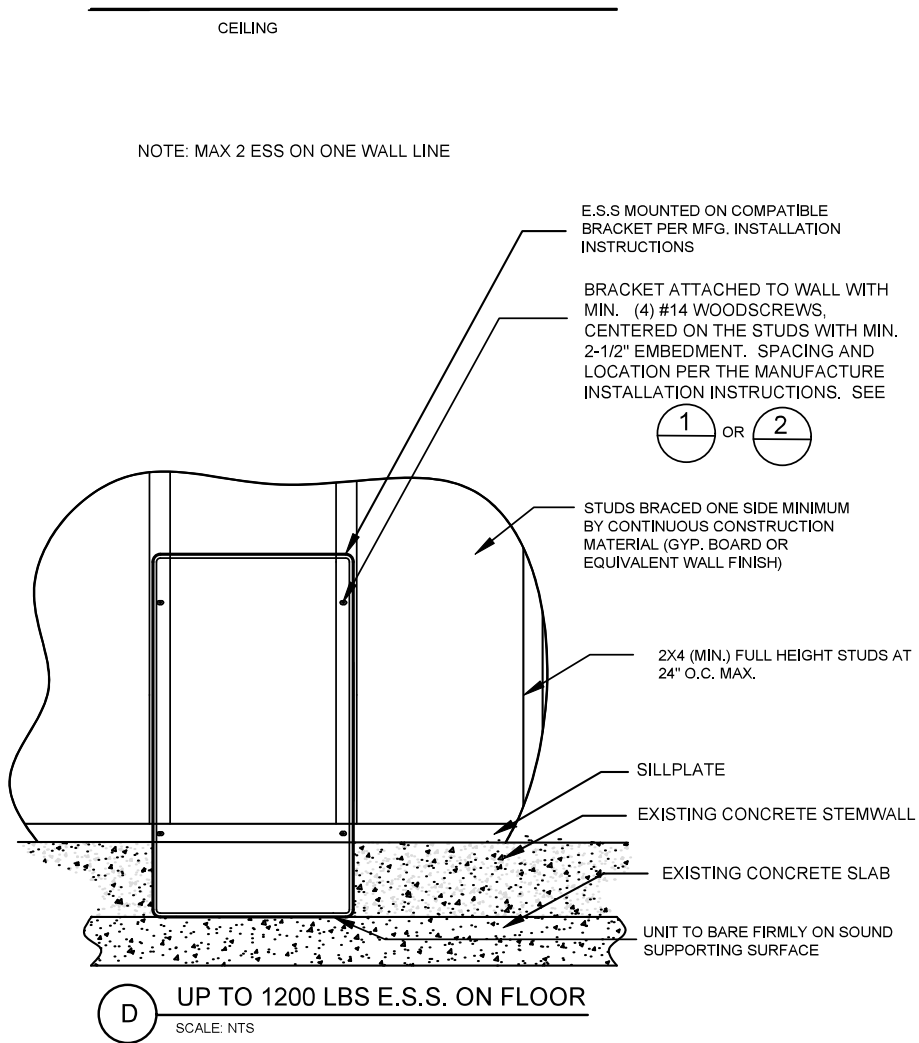
B UP TO 400 LBS E.S.S. ON TWO STUDS
SCALE: NTS



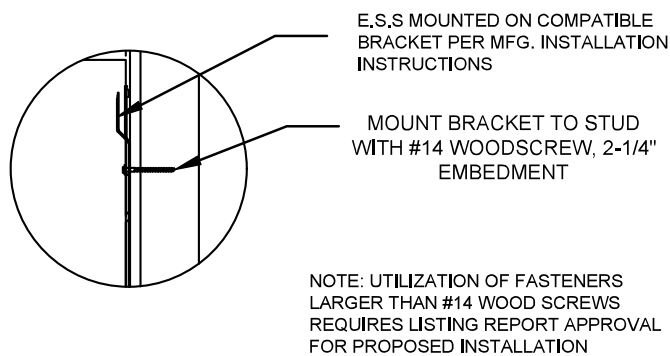
C UP TO 600 LBS E.S.S. ON THREE STUDS
SCALE: NTS

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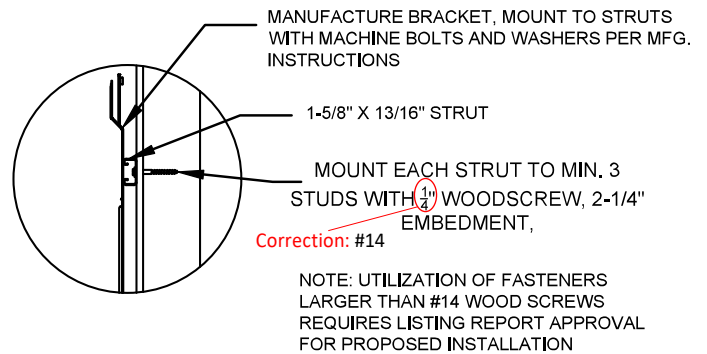
ESS CSJ BRACKET DETAILS CONTINUED



D UP TO 1200 LBS E.S.S. ON FLOOR
SCALE: NTS



1 DIRECT ATTACHEMENT TO WOOD STUDS
SCALE: NTS



2 STRUT-ON-STUD ATTACHMENT
SCALE: NTS