City of San Juan Capistrano
Development Services Department
32400 Paseo Adelanto
San Juan Capistrano, CA 92675
Phone: (949) 443-6347
Email: building@sanjuancapistrano.org
www.sanjuancapistrano.org/building

Residential Electric Vehicle Permitting Guidelines

Types of Electric Vehicle (EV) Chargers

There are 2 basic types of EV chargers for home use (Level 1 and Level 2).

Level 1 chargers are smaller units that plug directly into a standard 120 volt receptacle outlet. These types of chargers typically require a longer period of time to recharge the vehicle. As long as the receptacle outlet being used to plug-in the Level 1 Charger is existing, there is no requirement to secure a permit from the Building and Safety Division. On the other hand, if you will be installing a new 120 volt receptacle outlet for the charger, you will need to obtain a permit – but you will not need to provide any plans or electrical load calculations as would be required for the more powerful Level 2 type charging systems.

Level 2 chargers require a 240 volt electrical circuit and charges the vehicle battery much faster than a Level 1 charger. Level 2 charger installations typically require an electrical permit and inspections of the installation. In order to obtain the permit you will need to provide some basic information to show that your existing electrical service can handle the added load.

What information do I need to provide in order to obtain the permit?

- Building Permit Application
- NEC Electrical Load Calculation (see page 2)
- Site Plan
- Manufacturer's Specifications

Installing a Level 2 EV Charging system often requires changes to building's electrical wiring. Before installing the EV charging equipment and the associated wiring, talk to your EV manufacturer about the electrical requirements for the charger unit to be installed at your home.

When installing your EV charger, be sure to use a licensed Electrical contractor whose state contractor's license and insurance are current. The contractor should follow the installation instructions of the EV charger manufacturer and the requirements of California Electrical Code.

Why is the Electric Utility concerned about your EV charger installation?

Though an individual Level 2 EV charger may have a negligible impact on the utility electric system, the combined effect of several chargers in the same neighborhood could result in overloads on utility secondary wires and transformers. It is important that the Electrical Utility provider be notified of any Level 2 charger installations to ensure that utility electrical system components are adequately sized to maintain high levels of service reliability.

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PERMIT NUMBER
-

TARGET DATE

HOA REQUIRED
☐ YES ☐ NO

INT. ALT. SF	ADDITION SF	POOL/SPA SF

JOB ADDRESS

JOB VALUATION	OCCUPANCY TYPE	PATIO SF
$		

DESCRIPTION OF WORK

APPLICANT NAME
CONTACT PHONE #
( )
EMAIL ADDRESS

TENANT

Name _____
Address _____
City/State/Zip _____
Phone ( )

PROPERTY OWNER

Name _____
Address _____
City/State/Zip _____
Phone ( )

ARCHITECT / ENGINEER / DESIGNER

Name _____
Address _____
City/State/Zip _____
Phone ( )
State License # _____

CONTRACTOR

State License #: _____
Name _____
Address _____
City/State/Zip _____
Phone ( )

ELECTRICAL	QTY
Extend Electrical	
Light Fixtures/Fans	
Motors > than 1 HP	
Motors < than 1 HP	
Miscellaneous	
Pool/Spa	
Outlets/Switches	
Meters/Main Panels	
Signs	
Temp Power	
ISSUANCE	

MECHANICAL	QTY
AC/Comp BTU=	
Appliance Vent	
Duct/Register/Grill	
Exhaust Fans	
Fireplace	
FAU < 100k BTU's	
FAU > 100k BTU's	
Miscellaneous	
Pool/Spa	
Vent/Exhaust Hood	
ISSUANCE	

PLUMBING	QTY
Building Sewer	
Extend Plumbing	
Fire Sprinkler Heads	
Fixtures/Hose Bibs	
Gas Systems	
Grease Interceptor	
Pool/Spa	
Water Heater	
Water Piping	
ISSUANCE	

MOBILE HOME	QTY
Carport	
Porch	
Awning	
Cabana	
New/Setup	
Earthquake Bracing	
Electrical Wiring	
Gas Piping	
Sewage Disposal	
Water Piping	
ISSUANCE	

MICROFILE

SIGNATURE _____ **DATE** _____

NEC Standard Electrical Load Calculation for Single Family Dwellings

(Only for Service Ratings of 120/240V, 225 Amps Max)

Property Owner: _____ Address: _____

Total Floor Area of Dwelling (NEC 220.12): _____ Sq Ft.

Factor	**Quantity**		**Volt Amperes (VA)**
"General Lighting"			
1. General Lighting (Sq. Ft X 3 VA/Sq Ft (Table 220.12)	3 X sqft.		
2. Small Appliance Circuits (1500 VA per circuit) (NEC 220.52(A)) (minimum 2)	1500 X		
3. Laundry Circuit (1500 VA per circuit)(NEC 220.52(B))	1500 X		
4. Total General Lighting Load (Add lines 1, 2 & 3):			
5. First 3000 VA @ 100%:			3000
6. Total General Lighting Load – 3000 = _____ @ 35%=			
7. **Net General Lighting Load** (Per NEC 220.42) **(Add lines 5 & 6):**			
***Fixed Appliances(if insufficient space, use back):**	YES	NO	
• Garbage Disposal	☐	☐	
• Bathroom Fan	☐	☐	
• Microwave	☐	☐	
• Dishwasher	☐	☐	
• Other:	☐	☐	
• Other:	☐	☐	
Total			
8. 3 or less Appliances, Total Appliance VA; 4 or more Appliances, 75% of Total Appliance VA (NEC 220.53):			
***Other Loads (including motors, EV charger(s), etc.)**	YES	NO	Nameplate Rating (VA)
9. Electric Range (8000VA or Nameplate)**	☐	☐	
10. HVAC	☐	☐	
11. Electric Oven	☐	☐	
12. Electric Dryer (5000 VA minimum)**	☐	☐	
13. Electric Vehicle Charger			
14. Other:	☐	☐	
15. Other:	☐	☐	
16. 25% of largest motor (NEC 430.24)			
Total Service Load Volt-Amperes (VA) (Add lines 7, 8 & 9 thru 16) =			
Total Service Load Volt-Amperes / 240-volts = Amperes			
***Service Rating (Amperes)=**			

* For every "YES" answer, indicate VA rating of equipment

** Nameplate rating must be used if larger

*** Service Rating shall be greater than or equal to the Service load

FOR OFFICE USE ONLY

BUILDING OFFICIAL: _____ **DATE:** _____