



Community Development Department • Building Inspection Division
500 Castro Street • Post Office Box 7540 • Mountain View, California 94039-7540 • 650-903-6313 • FAX 650-903-6474

ELECTRIC VEHICLE CHARGER INSTALLATION SUBMITTAL REQUIREMENTS FOR ONE-TO-TWO FAMILY DWELLINGS

The following plan check submittal requirements are provided to help get your electric vehicle charger installation through the Building Division review and permitting process. Your cooperation in providing this information will ensure that your project qualifies for over-the-counter review. Designated appointment time must be requested by the applicant, this over-the-counter review service is available Fridays, between 1:00 pm – 3:00 pm.

Planning review and approval is required for properties managed by an HOA. Please provide a letter of approval or documentation to the Planning Division prior to your appointment time. For questions please contact the Planning and Zoning Division directly at (650) 903-6306.

SUBMITTAL REQUIREMENTS

Provide two (2) complete sets of plans, load calculations, and manufacture cutsheets or specifications. Both sets of plans must be wet-signed by the designer/architect, contractor or homeowner. All plans submitted must be legible; the documentation provided will be digitally imaged as a permanent record for the property.

SITE PLAN

Show the location of:

- a. Existing or proposed structure(s) for which the electric vehicle charger shall be affixed
- b. Parcel dimensions and outline
- c. Label street(s) frontage and access
- d. Location and size of main service panel
- e. Location and size of subpanel, existing and/or proposed
- f. Location of electric vehicle charger
- g. Pathway for electrical connection to EV

ELECTRICAL

Provide a single line diagram with the following items:

- a. Existing or proposed main service panel size
- b. Panel schedule
- c. Dedicated circuit for electric vehicle charger
- d. Wiring method and sizing
- e. Grounding and disconnect

Provide a load calculation breakdown:

- a. Design your project using CEC Article 625 and NEC 220

SYSTEM INFORMATION

Provide manufacturers cut sheets and listing information for all components:

- a. All UL listed equipment

For additional questions regarding the submittal requirements, review and permitting process, contact the Building Division at (650) 903-6313 during regular business hours.

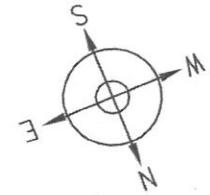
NEIGHBOR

BACK YARD

HOUSE

ABC STREET

DRIVE WAY



MAIN PANEL

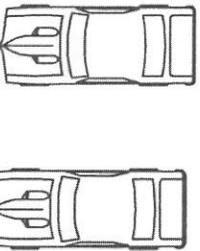
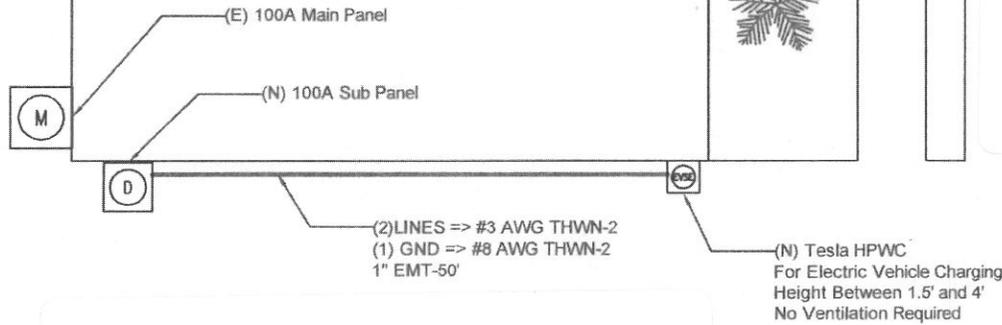
- Challenger
- Panel rated for 100A

SUB PANELS

- #1 : Challenger - 100A feeder breaker inside the main - located inside the house
- #2 : Murray - 100A feeder breaker inside the main - located outside in drive way

LEGEND

- Main Panel
- Load Center
- J-Box
- AC Disconnect
- EV Outlet
- Transfer Switch
- Conduit & Conductors
- Trench
- Tree



NEIGHBOR

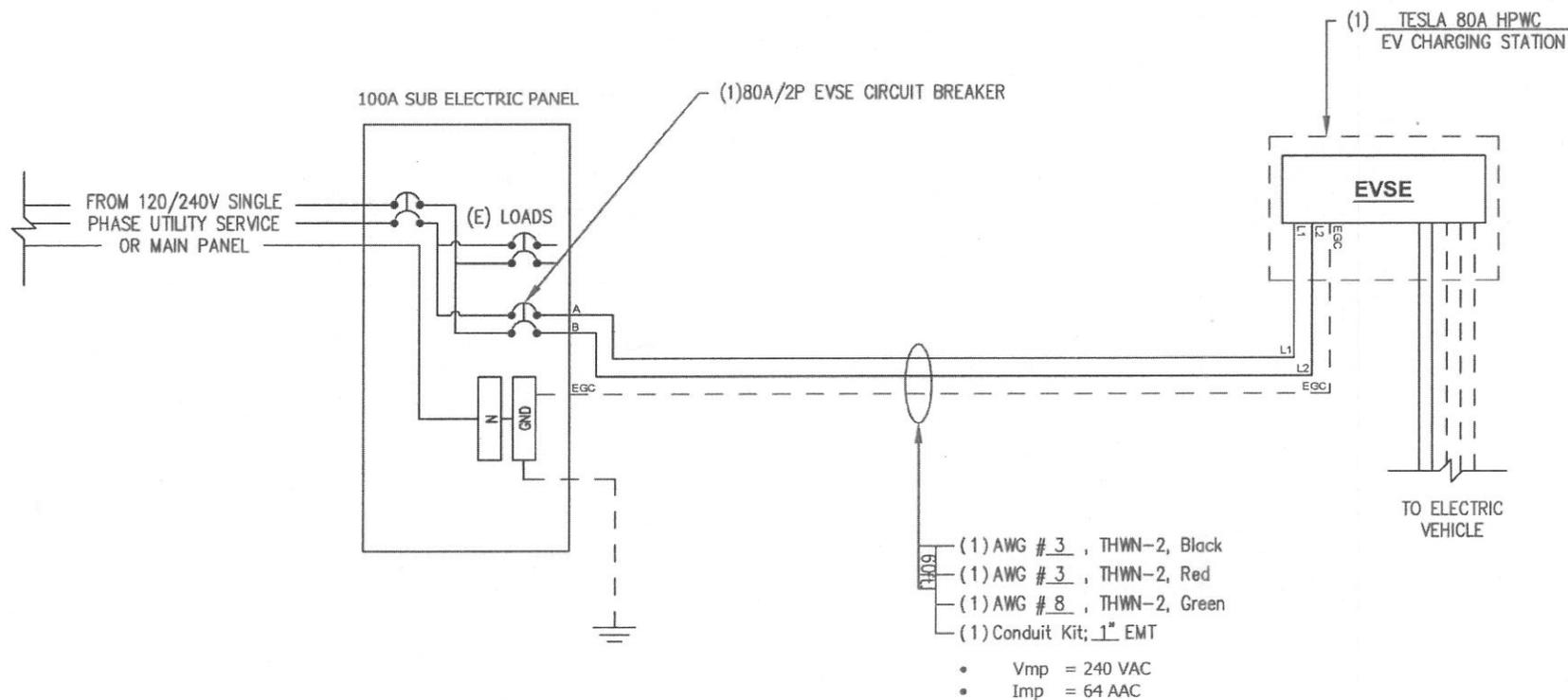
Site Plan

MAIN PANEL SERVICE RATING:
100A

CIRCUIT VOLTAGE/AMPERAGE:
240V/80A

CHARGER:
TESLA 80A HPWC

Mr. and Mrs. Smith
1234 ABC Street
Mountain View, CA 94042



Single-Line Diagram

AHL: Mountain View
MAIN PANEL SERVICE RATING: 100A
CIRCUIT VOLTAGE/AMPERAGE: 240V/80A
CHARGER: TESLA 80A HPWC

PREMISE OWNER: Mr. and Mrs. Smith 1234 ABC Street Mountain View, CA 94042
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NEC 220.83 - Adding a Circuit to an Existing Dwelling Unit

Square Feet: **2,100** Panel Breaker Rating: **100 A** L1/L2: **240 Vac**

NEC 220.83(A)(1) "General lighting and general use receptacles ... @ 3 volt/amperes per square foot as determined by 220.12"

2,100 square feet x 3w/sq ft **6,300 VA**

NEC 220.83(A)(2) Small appliance and laundry branch circuits @1500VA per 20 amp circuit

Number of circuits **3** x 1500= **4,500 VA**

NEC 220.83(A)(3)(b) "Household Range(s), wall-mounted oven(s), and counter-mounted cooking unit(s)"

Oven	7,680 VA
Microwave	0 VA
	7,680 total VA

NEC 220.83(A)(3)(a) "All other appliances that are permanently connected, fastened in place, or connected to a dedicated circuit, at nameplate rating"

Dishwasher/Disposal	2,800 VA
Refrigerator	1,760 VA
Cooktop/Hood	1,760 VA
Washer	1,760 VA
Dryer	800 VA
Jacuzzi	1,500 VA
	0 VA
	0 VA
	0 VA
	0 VA
	0 VA
Tesla HPWC	15,360 VA
EVSE 1:	VA
EVSE 2:	VA
	25,740 total VA

Total of non air-conditioning loads: **44,220 total VA**

First 8kVA of load at 100% **8,000 VA**

Remainder of load at 40% **14,488 VA**

Adjusted total of non air-conditioning load **22,488 VA**

NEC 220.83(B) "Where additional air-conditioning equipment or electric space-heating equipment is to be installed..."

A/C Equipment Unit #1 and #2	0 VA
A/C Equipment Unit #3 and #4	0 VA
Total of A/C Loads and All Other Loads:	22,488 total VA

Total Proposed Calculated Load:	93.70 Amps
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Load Calculation(s)