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| COO Logo Building Dept | **CITY OF ONTARIO** **BUILDING DEPARTMENT**303 East B StreetOntario, CA 91764Phone (909)395-2023, Fax (909)395-2180 | **INFORMATION BULLETIN****301**Effective: 10 / 20 / 2023 Revised: - / - / - |
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| **ELECTRIC VEHICLE CHARGING SYSTEMS (EVCS)****FOR MULTIFAMILY AND COMMERCIAL/INDUSTRIAL PLAN SUBMITTAL REQUIREMENTS** |

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| Starting July 1, 2023, all permit applications for the Building Department will be required to be submitted digitally through Citizen Portal Access - <https://automation.ontarioca.gov/OnlinePermits/Default.aspx>. For Digital Submittals Instructions see Information Bulletin 109 on Building Department website under Applications/Forms - <https://www.ontarioca.gov/Building/Applications>. EVSE installation for Multifamily and Commercial/Industrial use requires a building and electrical permit from the Building Department. Plans and structural calculations are required to be submitted for review and approval prior to permit issuance. For an EVSE system located outdoors, review and approval by Planning Department is required prior to the issuance of the permit. EVSE shall be listed and labeled by an approved nationally recognized testing laboratory (NRTL). EVSE must be installed according to the manufacturer’s installation instructions, its listing, 2022 California Electrical Code (CEC), and 2022 California Building Code (CBC).There are three types EVSE for multifamily and commercial/ industrial properties:* **Level 1** connects directly into a standard 120 Volt receptacle outlet.
* **Level 2** requires a 240 Volt electrical circuit.
* **Level 3** requires a 480 Volt/208 Volt three-phase electrical circuit.

**THE FOLLOWING DOCUMENTS SHALL BE PROVIDED AT INITIAL SUBMITTAL:**1. Building permit application form completed (available at Building Department web site).
2. Complete Architectural/Structural/Electrical plans, stamped and signed by a California registered design professional.
3. Exception: Electrical plans may be signed by a California licensed Electrical Contractor (C-10) who is responsible for the design and installation of the system (design-built contractor).
4. Structural calculations stamped and signed by a licensed engineer.
5. Landscape or site improvement plans to be routed to Landscape Department (if scope of work involves site or landscape alteration plan).
6. Copies of EVCS manufacturer’s installation instructions & specifications.

**PLAN REQUIREMENTS:**1. **ARCHITECTURAL PLANS**

**Site Plan and/or Floor Plan**A site plan and/or a floor plan (if EVCS located inside a building) must be provided showing the following information:1. Site plan showing location of the buildings and their footprints, landscaped areas, any existing and proposed outdoor EVCS stations, any other existing or proposed electrical equipment, property lines,

street, the north orientation, pedestrian circulation areas, existing parking areas, and all accessibility compliance information associated with the proposed EVSCS.1. Floor plan showing location of the EVCS inside the building with all information of access compliance.
	* 1. Indicate on the plans the manufacturer name, model number, and the level type of each proposed type

of EVCS.* + 1. Charging unit elevations to demonstrate compliance with the reach ranges for side or front approach to the unit as required in the California Building Code.
		2. Signage for EVCS (International Symbol of Accessibility (ISA) signage for accessible spots shall be provided in compliance with Section 11B-812.8).
		3. Electrical wiring layout/routing and location of panel/subpanels connected to the EVCS system and the meter panel.
		4. EVCS shall be protected against vehicle impact damage (CEC 110.27(B)). Provide protection bollards as

an equipment guard for EVCS & detail accordingly. **Accessibility Plans**1. Specify location and number of all existing and new EVCS, and show compliance with the accessibility standards of CBC, Chapters 11A and or 11B as applicable.
2. Construction plans shall show compliance with the CBC Section 11B-228.3 and Section 11B-812. For a facility with public and common use, provide the minimum required number of EVCS units per Section 11B-228.3.2.1.
3. Clearly identify accessible EVCS, accessible path of travel to the EVCS, maneuvering clearance and reach ranges at each EVCS, accessible route, access aisle, surface marking, signage, surface material, and running and cross slopes.
4. Provide a table specifying total number of parking spaces, number of EVCS provided, number of standard, van, and ambulatory accessible spaces designated for charging electric vehicles are provided.

Note: EVCS not available to the general public and intended for use by a designated vehicle or driver shall not be required to comply with CBC Section 11B-228.3.2 Minimum Number. Examples include, but are not limited to, EVCS serving public or private fleet vehicles and EVCS assigned to an employee (CBC 11B-228.3.2 exception).1. **STRUCTURAL PLANS**

For all freestanding EVCS installations, structural plans, calculations and attachment details signed/stamped by a Licensed Civil or Structural Engineer must be submitted to justify for the attachment of the EVCS and ancillary equipment considering critical loading conditions for the following installations:1. The weight of each equipment associated with EV charging system is in excess of 400 pounds or
2. The equipment is suspended from floor/roof above weighing in excess of 20 pounds or
3. Floor or ground supported equipment with a center of mass more than 4 feet above the floor/ground level. (ASCE 7-16 Section 13.1]
4. For outdoor location EVCS support and anchorage must be designed for 110 mph wind exposure C (per City Ordinance).
5. **ELECTRICAL PLANS**

Electrical plans shall include the following information:1. Electrical wiring layout site plan and show location of all electrical equipment.
2. Single-line diagrams showing the main service, over current protection devices, subpanels, disconnecting means, EV Charger circuit supplies, point of connection to the power supply and the charging unit(s).
3. Electrical load calculations (with existing loads and new added loads) that demonstrate electrical service and/or distribution equipment is not overloaded.

*Note: Unless all electrical equipment and overcurrent protective devices are listed for use at 100% of rated load, the calculated load on this equipment shall not exceed 80a› of the nameplate rating of the equipment or the over-current protection device (OCPD).* 1. Fault current calculations
2. Electrical panel schedule
3. Specify wire size & insulation type, conduit type & size, equipment grounding conductor type & size, and circuit overcurrent protection device, (circuit breaker and fuse), and rating.
4. Overcurrent protection for feeders and branch circuits supplying EVSE shall be sized for continuous duty and shall have a rating of not less than 125a» of the maximum load of the equipment (CEC 625.41).
5. Conductors shall be sized to support 12586 of the rated equipment loads (CEC 62S.21) unless permitted otherwise.
6. Manufacturers’ data sheets for the listed charging equipment.
7. Amperage supplied to charge the electric vehicle.
8. Provide a trenching detail.
9. EVCS has an appropriate NEMA rated enclosure (CEC 110.28) and the wiring method complies with CEC 625.17(A) through (D).
10. The overall useable cord length shall not exceed 25’ in length unless equipped with a cable management system that is part of the listed electric vehicle supply equipment (CEC 625.17(C)).
11. The coupling means of the EVSE shall be stored at a height of 18” min. above the floor level for indoor locations and 24" min. above the parking surfaces for outdoor locations except portable EVSE (CEC 625.50).
12. Ensure sufficient space exists around electrical equipment for safe operation and maintenance (CEC 110.26); The minimum required space is 30” wide, 3’ deep and 6’6” high and will be higher depending upon system voltage.
13. EVCS rated more than 60 amps or more than 150 volts to ground, the disconnect means shall be provided and installed in a readily accessible location. The disconnecting means shall be capable of being locked on the open position (CEC 625.43).

**PLAN REVIEW PROCESS:**1. Applicant submits a building permit application with plans and supporting documents to the Building Department digitally through Citizen Portal Access - <https://automation.ontarioca.gov/OnlinePermits/Default.aspx>.
2. Permit specialist validates the submittal package and assigns an application tracking number once plan check fee paid.
3. The submittal package is then routed for a concurrent plan review to the following Departments:
	* 1. Building Department
		2. Planning Department
		3. Landscape (if applicable)
4. It is important that the applicant/engineer coordinates their submittals such that corrections from each plan review department are incorporated on each set of plans. Plans will not be allowed to be resubmitted until all reviewing departments have completed their review and address all their corrections.
5. After the plan is reviewed and approved by all departments, the Building Department coordinates the final approval process and permit creation.

**RESUBMITTAL REQUIREMENTS:**1. Resubmit previous plans and supporting documents including the correction list from each reviewing department.
2. Submit new plans and new supporting documents.
3. Provide a separate Response Letter for each department that has correction list.
4. Plans and supporting documents will be routed to the other reviewing departments for recheck.
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