

Exception to Section 110.10(b)3: Any roof obstruction, located on the roof or any other part of the building, that is oriented north of all points on the solar zone.

C. The solar zone needs to account for shading from obstructions that may impact the area required in 110.10(b)1B. When determined by the Building Official that conditions exist where excessive shading occurs and solar zones cannot be met, a performance equivalency approved by the Building Official may be used as an alternative.

- 4. Structural Design Loads on Construction Documents. For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.**

Note: Section 110.10(b)4 does not require the inclusion of any collateral loads for future solar energy systems.

(c) Interconnection Pathways.

1. The construction documents shall indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service.

2. For single family residences and central water-heating systems, the construction documents shall indicate a pathway for routing of plumbing from the solar zone to the water-heating system.

(d) Documentation. A copy of the construction documents or a comparable document indicating the information from Sections 110.10(b) through 110.10(c) shall be provided to the occupant.

(e) Main electrical service panel.

1. The main electrical service panel shall have a minimum bus bar rating of 200 amps.

2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space shall be permanently marked as "For Future Solar Electric".

SECTION 3: San Carlos Municipal Code Section 15.04.125 - Title 24, Part 11, California Green Building Standards, is hereby amended as follows (new language is shown with **bold underline**. Removed language is shown in ~~strikethrough~~):

Sec. 9.256 – SECTION 202 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

SECTION 202 of the Green Building Standards Code is amended to add definitions for "Electric Vehicle (EV) Capable", "Level 1 Electric Vehicle (EV) Ready Space", "Level 2 Electric Vehicle

(EV) Ready Space”, “Electric Vehicle Charging Station (EVSC)”, and “Automated Load Management System (ALMS)” to read as follows:

ELECTRIC VEHICLE (EV) CAPABLE. A listed electrical panel with sufficient capacity to provide a minimum 20 amperes to a designated charging space. Raceways from the electrical panel to the charging space(s) shall be installed to a charging space(s) only in locations that will be inaccessible in the future, either underground or where penetrations through walls, floors, or other partitions would otherwise be required for future installation of branch circuits. Raceways shall be at least 1” diameter and may be sized for multiple circuits as allowed by the California Electrical Code. The electric panel circuit directory shall identify the overcurrent protection device space(s) reserved for EV charging as “EV CAPABLE.” Construction documents shall identify the location of the raceway from the panel to the charging space.

LEVEL 1 ELECTRIC VEHICLE (EV) READY SPACE. A complete electric circuit with a minimum 20-ampere capacity, including electrical panel capacity, overcurrent protection device, a minimum 1” diameter raceway that may include multiple circuits as allowed by the California Electrical Code, conductors, and either a) a receptacle, labelled “Electric Vehicle Outlet” with a minimum ½” font, adjacent to the parking space, or b) electric vehicle supply equipment (EVSE).

LEVEL 2 ELECTRIC VEHICLE (EV) READY SPACE. A complete electric circuit with a minimum 208/240 Volt, 40-ampere capacity, including electrical panel capacity, overcurrent protection device, a minimum 1” diameter raceway that may include multiple circuits as allowed by the California Electrical Code, conductors, and either a) a receptacle, labelled “Electric Vehicle Outlet” with a minimum ½” font, adjacent to the parking space, or b) electric vehicle supply equipment (EVSE) with a minimum output of 30 amperes.

ELECTRIC VEHICLE CHARGING STATION (EVCS). One or more electric vehicle charging spaces that include the installation of electric vehicle supply equipment (EVSE) with a minimum capacity of 30 amperes connected to a circuit serving a Level 2 EV Space. EVCS installation may be used to satisfy a Level 2 EV Ready Space requirement.

AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS). A control system that allows multiple EV chargers or EV-Ready electric vehicle outlets to share an electrical circuit and automatically reduce power at each charger. ALMS systems must be designed to deliver at least 1.4kW to each EV Capable, EV Ready, or EVCS space served by the ALMS. The connected amperage on-site shall not be lower than the required connected amperage per Part 11, 2019 California Green Building Code for the relevant building types.

SECTION 4 **RESIDENTIAL MANDATORY MEASURES**

Sec. 9.257. – SECTION 4.106.4 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

Section 4.106.4 of the Green Building Standards Code is amended to read as follows:

4.106.4 Electric vehicle (EV) charging for new construction. New construction and shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.

Exceptions:

1. **Where there is no commercial power supply**
2. **Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU)**
3. **Spaces accessible only by automated mechanical car parking systems are excepted from providing EV charging infrastructure.**
4. **Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost by more than \$400 per dwelling unit for residential buildings that entirely consist of either affordable rental units, defined as units rented at an amount consistent with the maximum rent levels for a housing development that receives an allocation of state or federal low-income housing tax credits from the California Tax Credit Allocation Committee. Residential developments meeting the above definition must have Inclusionary Housing Plan that is approved by the Housing Division pursuant to Section 18.37.090. If costs are found to exceed this level, the applicant shall provide EV infrastructure up to a level that would not exceed this cost for utility service or on-site transformer capacity.**

Sec. 9.258. – SECTION 4.106.4.1 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

Section 4.106.4.1 of the Green Building Standards Code is amended to read as follows:

4.106.4.1 New one- and two-family dwellings, town- houses with attached private garages. For each dwelling unit, install a Level 2 EV Ready Space and Level 1 EV Ready Space.

Exception: For each dwelling unit with only one parking space, install a Level 2 EV Ready Space.

4.106.4.1.1 Identification. The raceway termination location shall be permanently and visibly marked as “Level 2 EV-Ready”.

Sec. 9.259. – SECTION 4.106.4.2 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

4.106.4.2 New multifamily dwellings. The following requirements apply to all new multifamily dwellings. Up to, and no more than, two dwelling unit parking spaces shall share access to one EV Ready Circuit that is within 3 feet of each parking space:

1. 10% of the dwelling units with parking space(s) shall be provided with at least one Level 2 EV Ready Space. Calculations for the required minimum number of Level 2 EV Ready spaces shall be rounded up to the nearest whole number.
2. In addition, each of the remaining dwelling units with parking space(s) shall be provided with at least a Level 1 EV Ready Space.

Notes:

1. ALMS may be installed to decrease electrical services and transformer capacity associated with EV Charging Equipment subject to review of the authority having jurisdiction.
2. Installation of Level 2 EV Ready Spaces above the minimum number required level may offset the minimum number Level 1 EV Ready Spaces required on a 1:1 basis.
3. The requirements apply to multifamily buildings with parking spaces including: a) assigned or leased to individual dwelling units, and b) unassigned residential parking.
4. The City of San Carlos may consider allowing exceptions, on a case by case basis, if a building permit applicant provides documentation detailing that an increased cost of utility service or on-site transformer capacity would exceed an average of \$4,500 among charging spaces with Level 2 EV Ready Spaces and Level 1 EV Ready Spaces. If costs are found to exceed this level, the applicant shall provide EV infrastructure up to a level that would not exceed this cost for utility service or on-site transformer capacity.

Sec. 9.260. – SECTION 4.106.4.2.2 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

Section 4.106.4.2.2 of the Green Building Standards Code is amended to read as follows:

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. Refer to the City of San Carlos Planning and Building Department Zoning Regulations for parking space dimension requirements.

SECTION 5
NONRESIDENTIAL MANDATORY MEASURES

Sec. 9.261. – SECTION 5.106.5.3 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

Section 5.106.5.3 of the Green Building Standards Code is amended to read as follows:

5.106.5.3 Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation and use of EV chargers of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code and as follows:

Exceptions:

1. Where there is no commercial power supply.
2. Spaces accessible only by automated mechanical car parking systems are excepted from providing EV charging infrastructure.

5.106.5.3.1 Office buildings: In nonresidential new construction buildings designated primarily for office use with parking:

1. When 10 or more parking spaces are constructed, 10% of the available parking spaces on site shall be equipped with Level 2 EVCS;
2. An additional 10% shall be provided with at least Level 1 EV Ready Spaces; and
3. An additional 30% shall be at least EV Capable.

Calculations for the required minimum number of spaces equipped with Level 2 EVCS, Level 1 EV Ready spaces and EV Capable spaces shall all be rounded up to the nearest whole number.

Construction plans and specifications shall demonstrate that all raceways shall be a minimum of 1" and sufficient for installation of EVCS at all required Level 1 EV Ready and EV Capable spaces; Electrical calculations shall substantiate the design of the electrical system to include the rating of equipment and any on-site distribution transformers, and have sufficient capacity to simultaneously charge EVs at all required EV spaces including Level 1 EV Ready and EV Capable spaces; and service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

Note:

1. ALMS may be installed to increase the number of EV chargers or the amperage or voltage beyond the minimum requirements in this code. The option does not allow for installing less electrical panel capacity than would be required without ALMS.

5.106.5.3.2 Other nonresidential buildings: In nonresidential new construction buildings that are not designated primarily for office use, such as retail or institutional uses:

1. When 10 or more parking spaces are constructed, 6% of the available parking spaces on site shall be equipped with Level 2 EVCS;
2. An additional 5% shall be at least Level 1 EV Ready.

Calculations for the required minimum number of spaces equipped with Level 2 EVCS and Level 1 EV Ready spaces shall be rounded up to the nearest whole number

Exception: Installation of each Direct Current Fast Charger with the capacity to provide at least 80 kW output may substitute for 6 Level 2 EVCS and 5 EV Ready spaces after a minimum of 6 Level 2 EVCS and 5 Level 1 EV Ready spaces are installed.

5.106.5.3.3 Clean Air Vehicle Parking Designation. EVCS qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

Notes:

1. **The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/traffops/policy/13-01.pdf.**
2. **See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.**
3. **The Governor’s Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.**
4. **Section 11B-812 of the California Building Code requires that a facility providing EVCS for public and common use also provide one or more accessible EVCS as specified in Table 11B-228.3.2.1.**
5. **It is encouraged that for shared parking, EV Ready Spaces are designated as “EV preferred.”**
5.106.5.3.4 [N] Identification. The raceway termination location shall be permanently and visibly marked as “EV Ready”.

SECTION 4: Severability. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed this Ordinance sentence by sentence, paragraph by paragraph, and section by section, and does hereby declare that any provisions on this Ordinance are severable and, if for any reason any sentence, paragraph or section of this Ordinance shall be held invalid, such decision shall not affect the validity of the remaining parts of this Ordinance.

SECTION 5: Effective. Pursuant to Section 36937 of the Government Code of the State of California, this Ordinance shall take effect and be in full force and effect thirty (30) days after its final passage and upon approval by the California Energy Commission, whichever is later.

SECTION 6: Publication. The City Clerk shall cause this Ordinance to be published and posted in accordance with the requirements of Section 36933 of the Government Code of the State of California.

I, City Clerk Crystal Mui, hereby certify that the foregoing Ordinance was introduced by the City Council of the City of San Carlos on the 25th day of January, 2021 and passed and adopted at a regular meeting thereof held on ____ day of _____, 2021, by the following vote:

AYES, COUNCIL MEMBERS: _____

Attachment: Ordinance - Reach Code (Reach Code)