# DRAFT EXPRESS TERMS

# WORKSHOP MARCH 30, 2021FOR PROPOSED BUILDING STANDARDSOF THE CALIFORNIA BUILDING STANDARDS COMMISSION

# AND THE DIVISION OF THE STATE ARCHITECTREGARDING THE **2021 TRIENNIAL CODE ADOPTION CYCLE**,

# CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART **11**

If using assistive technology, please adjust your settings to recognize underline, strikeout and ellipsis.

## LEGEND for EXPRESS TERMS

* Existing California amendments appear upright
* Amended or new California amendments appear underlined
* Repealed California language appears ~~upright and in strikeout~~
* Ellipsis ( ...) indicate existing text remains unchanged

# INITIAL EXPRESS TERMS

# DEFINITIONS

**AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS)**. A system designed to manage load across one or more Electric Vehicle Grid Interface to share electrical capacity and automatically manage bidirectional power at each connection point and/or provide other grid services.

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG and DSA are proposing a definition for Automatic Load Management System (ALMS) which is needed to allow for the use of energy savings systems to promote EV expansion. Additionally, ALMS regulations are being proposed in the mandatory and voluntary sections of the code. This proposed definition is being coordinated with other state agencies that are also proposing similar amendments. The proposed definition will add consistency for the various occupancies within the CALGreen code. The intent is to make the definition generic in nature to allow for the actual code section for ALMS to dictate the code requirements.*

**EV CAPABLE SPACE-** Vehicle space with Electrical panel capacity and space to support a branch circuit and necessary raceways, both underground and/or surface mounted, to support future EV charging.

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG and DSA are proposing a definition EV capable. These amendments will eliminate redundant language defining an EV capable space in Chapters 4 and 5, and in Appendices A4 and A5. Additionally, EV CAPABLE language is being proposed in the mandatory and voluntary applicable code sections. This proposed definition is being coordinated with other state agencies that are also proposing similar amendments. The proposed definition will add consistency for the various occupancies within the CALGreen code.*

*The intent behind removing the amperage from the proposed definition is to make it very generic and allow for the actual EV Capable code section to dictate the code requirements.*

**…**

**Off-street loading space -** an area, other than a public street, public way, or other property (and exclusive of off-street parking spaces), permanently reserved or set aside for the loading or unloading of motor vehicles, including ways of ingress and egress and maneuvering areas. Whenever the term "loading space" is used, it shall, unless the context clearly requires otherwise, be construed as meaning off-street loading space.

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG is proposing a definition for off-street loading Space is needed to because it is being used in new proposed code language*.

**. . .**

~~VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 per- sons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purposes of ridesharing.~~

~~Note: Source: Vehicle Code, Division 1, Section 668.~~

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG and DSA propose to repeal the definition for Vanpool vehicle since the related code Section 5.106.5.2 for Clean air vehicles which mentions vanpool is proposed for repeal. This amendment will maintain consistency within the CALGreen Code.*

**…**

# DESIGNATED PARKING

**~~5.106.5.2 Designated parking for clean air vehicles.~~** ~~In new projects~~ **~~. . .~~**

**~~. . .~~**

**~~TABLE 5.106.5.2~~**

| **~~TOTAL NUMBER OF PARKING SPACES~~** | **~~NUMBER OF~~** **~~REQUIRED SPACES~~** |
| --- | --- |
| ~~0-9~~ | ~~0~~ |
| ~~10-25~~ | ~~3~~ |
| ~~26-50~~ | ~~6~~ |
| ~~51-75~~ | ~~9~~ |
| ~~76-100~~ | ~~12~~ |
| ~~101-150~~ | ~~18~~ |
| ~~151-200~~ | ~~21~~ |
| ~~201 and over~~ | ~~At least 12 percent~~~~of total~~~~1~~ |

~~1. Calculation for spaces shall be rounded up to the nearest whole number.~~

~~Note: Designated parking for clean air vehicles shall count toward the total parking spaces required by the local enforcing agencies.~~

**Statement of specific purpose, problem, rationale and benefits:**

 *BSC-CG and DSA proposes to repeal Section 5.106.5.2, Table 5.106.5.2 with footnote, and “Note” below Table 5.106.5.2.*

*Table 5.106.5.3.3 has been changed to capture 20% of the total number of actual parking spaces to be either EV capable or Level 2 EVSE. Since EV capable spaces can be used to comply with the clean air vehicles requirement percentages and the EV capable percentages are being significantly increased; it has determined that the Designated parking for clean air vehicles requirement is no longer needed.*

# MANDATORY ELECTRIC VEHICLE CHARGING

**5.106.5.3 Electric vehicle (EV) charging. [N]** Construction shall comply with Section5.106.5.3.1 and in accor­dance with regulations in the *California Building Code* and*,* the *California Electrical Code*. ~~or Section 5.106.5.3.2 to facilitate future installation 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:** On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.

2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

3. Spaces accessible only by automated mechanical car parking systems are exempted from providing EV charging infrastructure.

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG and DSA propose to amend Section 5.106.5.3 to make the section applicable to EV Capable regulations only and remove the verbiage pertaining to EVSE. Section 5.106.5.3.1. “Exceptions” is being relocated from Section 5.106.5.3.3. and placed under Section 5.106.3 as general charging language. Additionally, line 3 has been added to exceptions to not require EV infrastructure for spaces that are only accessible by automated mechanical car parking systems.*

**~~5.106.5.3.1 Single charging space requirements. [~~**~~N] When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:~~

1. ~~The type and location of the EVSE.~~
2. ~~A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.~~
3. ~~The raceway shall not be less than trade size 1.”~~
4. ~~The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure or equivalent.~~
5. ~~The service panel or subpanel shall have sufficient capacity to accommodate a minimum of 40- ampere dedicated branch circuit for the future installation of the EVSE.~~

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG and DSA propose to repeal Single charging space requirements since the 2019 Intervening Code Cycle increased the percentages for EV Capable spaces that no longer allow for a single EV capable space which makes this section obsolete.*

**5.106.5.3.~~2~~ 1 ~~Multiple~~ ~~charging space requirements~~ EV Charging spaces (EV capable)**

When ~~multiple~~ charging spaces are required per Table 5.106.5.3.3, raceways~~(s) is/~~are required tobe installed at the time of construction ~~and~~ shall be installed in accordance with the *California Electrical Code*. ~~Construction plans and specifications shall include, but are not limited to, the following:~~ Each required space shall include the following minimum requirements:

~~1.The type and location of the EVSE.~~

~~2~~ 1. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area~~,~~ and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet~~(s),~~ box~~(es),~~ enclosure~~(s)~~ or equivalent. A common raceway may be used to serve multiple charging spaces.

~~3~~ 2. Panel capacity at time of construction for each charging space shall be ~~Plan design shall be based upon~~ a 208/240 volts, 40-ampere minimum branch circuit~~s~~.

~~4~~ 3 ~~Electrical calculations shall substantiate the design of the electrical system, to include the rating of~~ The electrical system ~~equipment~~ and any on-site distribution transformers ~~and~~ shall have sufficient capacity to ~~charge~~ supply all required ~~EVs~~ EVSE at full rated amperage at each required charging space. ~~its full rated amperage.~~

~~5~~ 4 The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuits ~~(s)~~ for the future installation of the EVSE.

5.Identification.The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as “EV CAPABLE”. The raceway termination location shall be permanently and visibly marked as “EV CAPABLE”.

6. EV capable and installed EVSE shall count toward the total parking spaces required by the local enforcing agencies.

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG and DSA propose to amend Section 5.106.5.3.2 and renumber it to the available Section 5.106.5.3.1 with an editorial amendment to rename the title to EV Charging spaces (EV capable). The body of the language for lines 1 through 5 have been amended as follows: line 1 is deleted and lines 2 though 5 have been renumbered with editorial corrections to provide specificity to the application of the EV capable requirements. Line 5 have been added for “Identification” which has been relocated from Section 5.106.5.3.4. Line 6 language has been added to advise that EV capable and installed EVSE shall count toward the total parking spaces.*

**5.106.5.3.2 EV charging spaces with Level 2 EVSE.**

EV capable charging spaces are required to be provided with Level 2 EVSE as indicated by Table 5.106.3.3. When EVSE equipment is installed beyond the minimum required by Table 5.106.3.3, the following is permitted.

1. ALMS may be used to reduce the maximum required load capacity to each space served by the ALMS. ALMS must be designed to deliver at least 3.8 kW simultaneously to each EVCS space served by the ALMS and must meet the requirements of *California Electrical Code*. ALMS shall not be used to reduce the minimum required load capacity to EV capable spaces without EVSE equipment installed or to the minimum required EV charging spaces with EVSE required by Table 5.106.5.3.3.
2. Where six or more Level 2 EVSE chargers are installed, one Direct Current Fast Charger (DCFC) may be installed to substitute for five Level 2 EVSE’s and reduce the load capacity to each space required by 5.106.5.3.1. The installed DCFC shall be rated at 80kW minimum.

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG and DSA propose to utilize Section number 5.106.5.3.2 for new code language titled EV charging spaces with level 2 EVSE with code requirements for EVSE. Line 1 has been added to allow the use of an ALMS and line 2 has been added to allow the use of DCFC.*

*The intent is to allow for the use of ALMS and DCFC as a compliance method for reducing the amount of required power when additional chargers beyond code minimum are installed. The use of ALMS rated at 3.8kW minimum at each EVSE space ensures that each vehicle obtains a minimum of 3.8 kW or 20A which provides satisfactory charge time while reducing the total electrical EV load for the building. Additionally, allowing the use of ALMS and DCFC, gives the property owner options with code compliance and may provide incentives to install more chargers.*

**~~5.106.5.3.3. Charging space calculation~~**~~. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future~~

~~installation of EVSE.~~

**Statement of specific purpose, problem, rationale and benefits:**

*Section 5.106.5.3.3 is being repealed as the option for calculation for a single EV capable space is no longer available*

**~~Exceptions:~~** ~~On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:~~

~~1. Where there is insufficient electrical supply.~~

~~2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely~~

~~impact the construction cost of the project.~~

**Statement of specific purpose, problem, rationale and benefits:**

 *BSC-CG and DSA propose to relocate the “exceptions” below section 5.106.5.3.3 and place under Section 5.106.5.3, so it applies to both EV capable and EVSE regulations.*

**…**

**Table 5.106.5.3.3**

| **TOTAL NUMBER OF** **ACTUAL PARKING SPACES** | **NUMBER OF REQUIRED EV CHARGING SPACES****(EV CAPABLE)** | **NUMBER OF REQUIRED EV CHARGING SPACES****(LEVEL 2 EVSE)** |
| --- | --- | --- |
| 0-9 | 0 | 0 |
| 10-25 | ~~2~~ 4  | 0  |
| 26-50 |  ~~4~~  8  | 2 |
| 51-75 | ~~7~~ 13  | 3 |
| 76-100 | ~~9~~  17  | 4 |
| 101-150 | ~~13~~ 25 | 6 |
| 151-200 |  ~~18~~ 35  | 9 |
| 201 and over | ~~10~~ 20 percent of total parking spaces1 | 25 percent of EV capable spaces |

1. Calculation for spaces shall be rounded up to the nearest whole number.

**Statement of specific purpose, problem, rationale and benefits:**

*The table has been changed to capture 20% of the total number of actual parking spaces to be either EV capable or Level 2 EVSE. 25 % of the EV capable will be Level 2 EVSE, equating to approximate 5% of the total number of actual parking spaces. This increase is in response to the comments received during the January 7, 2021 workshop. To calculate the required number of EVSE’s for 201 or more parking spaces, multiply e.g. 201 x 20% and then multiply the summation by 25%.*

*CARB recommended BSC and DSA increase the original 10% EV capable to 20% of the total number of actual parking spaces and an additional 5% EVSE be installed. This recommendation would require the revised table to read 25% EV capable and 20% of EV capable be EVSE*

*Based on a brief cost analysis, increasing to 20% EV capable with 5% EVSE of the total number of actual parking spaces will cost approximately $627 million and increasing to the CARB proposed 25% EV capable with 5% EVSE for the total number of parking spaces will cost approximately $783 million. The total avoided retrofit costs for 20% is $2.57 billion and for 25% is $3.93 billion. Note: All costs are relative to current code requirements of 10% L2 EV capable and the totals are base over 8-year horizon (2023-2030).*

**~~5.106.5.3.4 [N]~~** **~~Identification.~~** ~~The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as “EV CAPABLE”. The raceway termination location shall be permanently and visibly marked as “EV CAPABLE.”~~

**Statement of specific purpose, problem, rationale and benefits:**

*Section 5.106.5.3.4 Identification is being relocated under Section 5.106.5.3.1 as line 5.*

**~~5.106.5.3.5 [N] Future charging spaces.~~**

~~Future charging spaces qualify as~~ **~~. . .~~** ~~clean air vehicles.~~

**Statement of specific purpose, problem, rationale and benefits:**

*Section 5.106.5.3.5 [N] future charging spaces is being repealed as the reference to clean air vehicles Section 5.016.5.2 is no longer needed since said code section is being repealed.*

~~Note: Future electric vehicle charging spaces shall count toward the total parking spaces required by the local enforcing agencies.~~

**Statement of specific purpose, problem, rationale and benefits:**

*The Note under Section 5.106.5.3.5 is also being repealed as it is no longer needed based on the related code section repeal.*

# MANDATORY MEDIUM-DUTY AND HEAVY-DUTY ELECTRIC VEHICLE CHARGING

**5.106.5.4 Electric vehicle (EV) charging: medium-duty and heavy-duty. [N]** Construction shall comply with Section 5.106.5.4.1 or Section 5.106.5.4.2 to facilitate future installation of electric vehicle supply equipment (EVSE). Construction for warehouses, grocery stores and retail stores with planned off-street loading spaces shall also comply with Section 5.106.5.4.1 for future installation of medium- and heavy-duty EVSE. When EVSE(s) is/are installed, it shall be in accordance with the *California Building Code,* the *California Electrical Code.*

Exception: For buildings less than 10,000 square feet, or on a case-by-case basis, where the local enforcing agency has evidence suitable for substantiating an adverse impact on the construction cost of the project directly related to the implementation of Section 5.106.5.4.1.

**5.106.5.4.1 Electric vehicle charging readiness requirements for warehouses, grocery stores and retail stores with planned off-street loading spaces [N]**

In order to avoid future demolition when adding EV supply and distribution equipment, spare raceway(s) or busway(s) and adequate capacity for transformer(s), service panel(s) or subpanel(s) shall be installed at the time of construction in accordance with the *California Electrical Code*. Construction plans and specifications shall include, but are not limited to, the following:

1. The transformer, main service equipment and subpanels shall meet the minimum power requirement in Table 5.106.5.4.1.1 to accommodate the dedicated branch circuits for the future installation of EVSE.
2. The construction documents shall indicate one or more location(s) convenient to the planned off-street loading space(s) reserved for medium- and heavy-duty ZEV charging cabinets and charging dispensers, and a pathway reserved for routing of conduit from the termination of the raceway(s) or busway(s) to the charging cabinet(s) and dispenser(s), as shown in Table 5.106.5.4.1.1.
3. Raceway(s) or busway(s) originating at a main service panel or a subpanel(s) serving the area where potential future medium- and heavy-duty EVSE will be located, and shall terminate in close proximity to the potential future location of the charging equipment for medium- and heavy-duty vehicles.
4. The raceway(s) or busway(s) shall be of sufficient size to carry the minimum additional system load to the future location of the charging for medium- and heavy-duty ZEVs as shown in Table 5.106.5.4.1.1.

**5.106.5.4.2 Raceway Conduit and Panel Amperage Requirements [N]**

Table 5.106.5.4.1.1 shall be used to determine the raceway conduit and panel amperage requirements for the potential future installation of EVSE at warehouses, grocery stores and retail stores with planned loading docks.

Exception: On a case-by-case basis, where the local enforcing agency has evidence suitable for substantiating an adverse impact in the construction cost of the project directly related to the implementation of Section 5.106.5.4.1.1.

**TABLE 5.106.5.4.1.1: Raceway Conduit and Panel Amperage Requirements [N]**

|  |  |  |  |
| --- | --- | --- | --- |
| Building Size | Number of Off-street loading spaces | Additional Raceway or Busway Capacity Required | Additional Transformer and Panel Capacity Required |
| 10,000 sq ft or Greater | 1 or 2  | 200 kVA | 200 kVA |
| 3 or more | 400 kVA | 400 kVA |
| 90,000 sq ft or Greater Grocery | 1 or more | 400kVA | 400kVA |
| 135,000 sq ft or Greater Retail  | 1 or more | 400kVA | 400kVA |
| 265,000 sq ft or Greater Warehouse  | 1 or more | 400kVA | 400kVA |

**Statement of specific purpose, problem, rationale and benefits:**

*BSC is proposing to add new code Section 5.106.5.5 Electric vehicle (EV) charging: medium-duty and heavy-duty. [N] and related subsections for the advancement of EVSE for medium-duty and heavy-duty vehicles.*

*CBSC proposes this section for adoption, which includes a mandatory requirement to install EV supply and distribution equipment, spare raceway(s) or busway(s) and adequate capacity for transformer(s), service panel(s) or subpanel(s) at the time of construction in accordance with the California Electrical Code to provide up to 400kW for zero-emission vehicle (ZEV) fueling in new warehouses, grocery stores, and retail buildings with off-street loading spaces to support the future addition of chargers for medium- and heavy-duty vehicles.*

*CBSC’s proposed action will support the implementation of the Governor’s Executive Order N-79-20 to achieve a benchmark for having for having a 100 percent zero-emissions medium- and heavy-duty fleet in California by 2045, with interim goals for drayage trucks in 2035. In June and July of 2020, 15 states signed the Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding to support widespread electrification of medium- and heavy-duty vehicles. This initiative is a Memorandum of Understanding signed by the governors of California, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island, Pennsylvania, Hawaii, Maine, New Jersey, Colorado, North Carolina, and Vermont, and the mayor of Washington D.C. The initiative demonstrates the commitment to support a successful and growing market for electric vehicles, an important strategy to help reduce emissions of criteria air pollutants and GHGs, and to reduce dependence on petroleum-based fuels. CBSC’s proposed amendments to the 2019/2020 Intervening CALGreen Code will support the Executive Order, the multi-state Memorandum of Understanding, and other state and local laws and policies.*

*The proposed changes to the building standards with statewide application will lead to substantial environmental benefits through reduction in energy use, GHG emissions, criteria pollutants, and fossil fuel dependency, leading to improved public health, and potentially result in significant cost savings (avoided costs) associated with future installation of EV charging stations at nonresidential buildings.*

*This change will help improve air quality and support the estimated emissions reductions from current California Air Resources Board (CARB) regulations which include: 19 million metric tons of carbon dioxide equivalent (MMTCO2e) total by 2050 from the Innovative Clean Transit Regulation, 0.5 MMTCO2e total by 2040 from the Zero-Emission Airport Shuttle Regulation, and 1.7 MMTCO2e per year by 2040 from the Advanced Clean Trucks Regulation. These estimated emissions reductions do not include those from the Advanced Clean Fleets Regulation currently under development. The proposed infrastructure additions could also be used to support zero-emission material handling equipment, and additional requirements to increase infrastructure for this equipment will be revisited in a future code cycle.*

*Initial construction costs of $176 million are estimated be incurred between the beginning of 2023 and the end of 2030 due to the adoption of this proposed mandatory measure and are estimated to save $515 million in future building electrification retrofit costs. The proposed code changes amount to an average additional cost of 58 cents per square foot. This regulatory action would marginally increase costs to newly constructed specified California nonresidential buildings. The increase in construction costs would add approximately 0.5 percent to the total new construction costs of warehouses, grocery stores, and retail buildings with off-street loading spaces, with significant benefits to Californians due to improved air quality and GHG emissions reduction. Without these code changes, the future cost to retrofit buildings in order to comply with CARB ZEV regulations, is estimated to be roughly seven times the cost of the proposed code changes.*

*This measure will protect public health and safety, the environment, and the general welfare of California residents.*

**…**

# VOLUNTARY ELECTRIC VEHICLE CHARGING

**SECTION A5.106, SITE DEVELOPMENT**

**~~A5.106.5.1 Designated parking for clean air vehicles. . . .~~**

**~~. . .~~**

**~~A5.106.5.1.1 Tier 1. Provide…~~**

**~~TABLE A5.106.5.1.1~~**

| **~~TOTAL NUMBER OF PARKING SPACES~~** | **~~NUMBER OF~~** **~~REQUIRED SPACES~~** |
| --- | --- |
| ~~0-9~~ | ~~1~~ |
| ~~10-25~~ | ~~3~~ |
| ~~26-50~~ | ~~7~~ |
| ~~51-75~~ | ~~11~~ |
| ~~76-100~~ | ~~15~~ |
| ~~101-150~~ | ~~26~~ |
| ~~151-200~~ | ~~30~~ |
| ~~201 and over~~ | ~~At least 17 percent~~~~of total~~~~1~~ |

~~1. Calculation for spaces shall be rounded up to the nearest whole number.~~

~~Note: Designated parking for clean air vehicles shall count toward the total parking spaces required by the local enforcing agencies.~~

**~~A5.106.5.1.2 Tier 2. Provide…~~**

**~~TABLE A5.106.5.1.2~~**

| **~~TOTAL NUMBER OF PARKING SPACES~~** | **~~NUMBER OF~~** **~~REQUIRED SPACES~~** |
| --- | --- |
| ~~0-9~~ | ~~2~~ |
| ~~10-25~~ | ~~4~~ |
| ~~26-50~~ | ~~9~~ |
| ~~51-75~~ | ~~14~~ |
| ~~76-100~~ | ~~18~~ |
| ~~101-150~~ | ~~26~~ |
| ~~151-200~~ | ~~36~~ |
| ~~201 and over~~ | ~~At least 22 percent~~~~of total~~~~1~~ |

~~1. Calculation for spaces shall be rounded up to the nearest whole number.~~

~~Note: Designated parking for clean air vehicles shall count toward the total parking spaces required by the local enforcing agencies.~~

**~~A5.106.5.1.3 Parking stall marking. Paint…~~**

**~~CLEAN AIR/ VANPOOL/EV~~**

**~~Note:~~**

**~~A5.106.5.1.4 Vehicle designation. Building…~~**

**~~Notes:~~**

1. ~~Information…~~

~~a…~~

~~b…~~

~~c…~~

~~d…~~

1. ~~Purchasing…~~

**Statement of specific purpose, problem, rationale and benefits:**

*BSC-CG proposes to repeal Section A5.106.5.1, A5.106.5.1.1 Tier 1, Table 5.106.5.1.1 with footnote 1, and “Note” below Table 5.106.5.1.1. BSC also proposes to repeal Section A5.106.5.1.2 Tier 2, Table 5.106.5.1.2 with footnote 1, and “Note” below Table 5.106.5.1.2.*

*BSC is currently proposing to increase the percentages for EV infrastructure for EV Capable spaces from 10% to 15% and including a requirement for installed EVSE’s of 5% as shown in Table 5.106.5.4 on ITEM 5. Since the EV capable spaces can be used to comply with meeting the clean air vehicles requirement percentages and the EV capable percentages are being significantly increased; BSC has determined that the Designated parking for clean air vehicles requirement is no longer needed. This amendment will allow for small parking lots to not be unjustly impacted by the increased EV Capable and EVSE proposed changes.*

***…***

**A5.106.5.3 ~~[N]~~ Electric vehicle (EV) charging. [N]** Construction shall comply with Section A5.106.5.3.1 ~~and~~ or A5.106.5.3.2, in accor­dance with regulations for electric vehicle charging in the *California Building Code* and*,* the *California Electrical Code*. ~~to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the~~ *~~California Building Code~~* ~~and the~~ *~~California Electrical Code~~* ~~and as follows:~~

**A5.106.5.3.1 Tier 1.** Table A5.106.5.3.1 shall be used to determine the number of ~~multiple~~ EV capable charging spaces required. ~~for future installation of EVSE.~~ Refer to Section 5.106.5.3.1 for design requirements.

When charging spaces are required to be equipped with EVSE, refer to Section 5.106.5.3.2 for the use of ALMS and DCFC.

**A5.106.5.3.2 Tier 2.** Table A5.106.5.3.2 shall be used to determine ~~if single or multiple charging space requirements apply for future installation of EVSE. When a single charging space is required,~~ the number of EV capable charging spaces required. ~~r~~ Refer to Section 5.106.5.3.1 for design requirements. ~~When multiple charging spaces are required, refer to Section 5.106.5.3.2 for design requirements.~~

When charging spaces are required to be equipped with EVSE, refer to Section 5.106.5.3.2 for the use of ALMS and DCFC.

**Statement of specific purpose, problem, rationale and benefits:**

*BSC proposes to amend Section A5.106.5.3.1 Tier 1 and Section A5.106.3.2 Tier 2 to add the verbiage for EV capable and to add the reference to the requirements found in the mandatory code Section 5.106.5.3.2 for ALMS and DCFC.*

**Table A5.106.5.3.1**

|  |  |  |
| --- | --- | --- |
| **TOTAL NUMBER OF ACTUAL PARKING SPACES** | **TIER 1** **NUMBER OF REQUIRED EV CHARGING SPACES****(EV CAPABLE)** | **TIER 1** **NUMBER OF REQUIRED EV CHARGING SPACES** **(LEVEL 2 EVSE)** |
| 0-9 |  ~~1~~ 2 | 0  |
| 10-25 | ~~3~~ 5 | 2  |
| 26-50 | ~~6~~ 11 | ~~4~~ |
| 51-75 | ~~10~~ 19 | 6 |
| 76-100 | ~~14~~ 26 | 9 |
| 101-150 | ~~23~~ 38 | 13 |
| 151-200 | ~~27~~ 53 | 18 |
| 201 and over | ~~15~~ 30 percent of total parking spaces1 | 33 percent of EV capable spaces |

1. Calculation for spaces shall be rounded up to the nearest whole number.

**Table A5.106.5.3.2**

|  |  |  |
| --- | --- | --- |
| **TOTAL NUMBER OF ACTUAL PARKING SPACES** | **TIER 2****NUMBER OF REQUIRED EV CHARGING SPACES****(EV CAPABLE)** | **TIER 2** **NUMBER OF REQUIRED EV CHARGING SPACES** **(LEVEL 2 EVSE)** |
| 0-9 | ~~2~~ 3 | 0  |
| 10-25 | ~~4~~ 8 | 3 |
| 26-50 | ~~8~~ 17 | 6  |
| 51-75 | ~~13~~ 28 | 9  |
| 76-100 | ~~18~~ 40 | 13  |
| 101-150 | ~~26~~ 57 | 19 |
| 151-200 | ~~36~~ 79 | 27  |
| 201 and over | ~~20~~ 45 percent of total parking spaces1 | 33 percent of EV capable spaces |

1. Calculation for spaces shall be rounded up to the nearest whole number.

**Statement of specific purpose, problem, rationale and benefits:**

*Table A5.106.5.3.1 and Table A5.106.5.3.2 are amended to provide a reasonable incremental percentage increase for EV Capable spaces above the proposed mandatory respective code Table 5.106.5.3.3. from 20% to 30% for Tier 1 and 45% for Tier 2. Additionally, a column for installed EVSE’s has been added which* *provide a reasonable incremental percentage increase above the proposed mandatory respective code Table 5.106.5.3.3. of 5% EVSE of total actual parking spaces to 10% for Tier 1 and 15% for Tier 2. For 201 or more vehicles parking spaces, the percentage of the of EVSE’s are calculated as a percentage of EV capable spaces which is equivalent to 10% for Tier 1 and 15% for Tier 2.*