

**FINAL STATEMENT OF REASONS
FOR PROPOSED BUILDING STANDARDS
OF THE DIVISION OF THE STATE ARCHITECT
REGARDING THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE,
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11**

(DSA SS/CC 03/21)

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a Final Statement of Reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

UPDATES TO THE INITIAL STATEMENT OF REASONS:

Government Code Section 11346.9(a)(1) requires an update of the information contained in the Initial Statement of Reasons. If the update identifies any data or any technical, theoretical or empirical study, report, or similar document on which the state agency is relying that was not identified in the Initial Statement of Reasons, the state agency shall comply with Government Code Section 11347.1.

The Division of the State Architect (DSA) has made no changes to the Initial Statement of Reasons (ISOR) as originally proposed.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

Pursuant to Government Code Section 11346.9(a)(2), if the determination as to whether the proposed action would impose a mandate, the agency shall state whether the mandate is reimbursable pursuant to Part 7 of Division 4. If the agency finds that the mandate is not reimbursable, it shall state the reasons for the finding(s).

The Division of the State Architect has determined that the proposed regulatory action would not impose a mandate on local agencies or school districts.

OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).

Government Code Section 11346.9(a)(3) requires a summary of EACH objection or recommendation regarding the specific adoption, amendment, or repeal proposed, and an explanation of how the proposed action was changed to accommodate each objection or recommendation, or the reasons for making no change. This requirement applies only to objections or recommendations specifically directed at the agency's proposed action or to the procedures followed by the agency in proposing or adopting the action, or reasons for making no change. Irrelevant or repetitive comments may be aggregated and summarized as a group.

The text with proposed changes was made available to the public for a 45-day comment period from August 13th, 2021, until September 27, 2021. DSA received the following public comments listed below.

The text, with proposed changes, was made available to the public for an additional 15-day comment period from October 13, 2021 through October 28, 2021. NO comments were received. Please see below for DSA 15day editorial correction.

COMMENTS RECEIVED DURING THE 45-DAY PUBLIC COMMENT PERIOD ARE LISTED BELOW

Item 6

Chapter 5, NONRESIDENTIAL MANDATORY MEASURES, Section 5.106.5.3 Electric Vehicle (EV) charging

Commenter(s) and Recommendation:

1. Mark Roest from Sustainable Energy, Inc- recommends Approve as Amend and states that it seems highly unlikely that a utility company wouldn't be able to deliver the power required by CALGreen and suggests using rooftop solar to power the new project.

Agency Response:

DSA appreciates the commenter. Upon further review DSA has decided to not accept the comment as the proposed exception is similar to the existing exception in current Section 5.106.5.3.3. EV charging space calculations.

Commenter(s) and Recommendation:

2. Laura Renger from Southern California Edison (SCE), Disapprove.

Comments: SCE has concerns with proposed DSA requirement that each EV Service Equipment (or charger) controlled by an Automated Load Management System (ALMS) “shall deliver a minimum 30 amperes to an EV when charging on vehicle and shall deliver a minimum of 3.3 kW while simultaneously charging multiple EVs.”

While SCE recognizes that there may be a desire by certain parties to establish a standard around minimum charging levels, SCE is concerned that the establishment of an arbitrary minimum requirement could limit the benefit that ALMS can provide in avoiding grid upgrade(s). Accordingly, SCE believes that DSA should collaborate with the California Public Utilities Commission and the investor-owned utilities to assess the potential impacts that a minimum requirement may have on the grid.

SCE is also concerned that currently there is not a standard for listing ALMS. As a result, it may be difficult for local jurisdictions to determine if installed ALMS with EVSE(s) would be safe for public use, and they may decide to approve an ALMS system without clear certification available in the market.

Agency Response:

DSA appreciates the commenter. Upon further review DSA has decided not to amend the proposal in response to the comment. The proposed minimum power requirements were fully vetted during various workshops and discussed during the

GREEN code advisory committee and garnered wide support by industry and affected parties. In terms of the development of a reference standard for listing for ALMS, DSA may consider the suggestions in future rulemaking cycles.

Commenter(s) and Recommendation:

3. Laura Renger from Southern California Edison (SCE), Disapprove.

SCE appreciates that the Building Standard Committee (DSA) has reviewed and determined that there are technical issues with the new EV Alternative Compliance Pathway (ACP) Section 5.106.5.3.1a, which proposed 30% “EV Ready” spaces with 5% Level 2 EVSE. SCE is concerned that the proposal to mandate “EV Ready” spaces, or the use of receptacles will create an unnecessary safety risk, and that a higher safety level is more appropriate with a fully installed EV charger (EV Service Equipment).

It is uncommon, if not unheard of in the United States, to provide higher than 120-volt live receptacles in the public space, where children could have access to them. Although, the Electrical Code allows for plug-connected EVSE, the EVSE should be fixed in place with the plug connected and covered to prevent tampering, exposing persons to live voltage, or partial disconnection, which could lead to arcing and thermal failure.

Receptacles are subject to wear with frequent use, and the pressure exerted on the plug can loosen over time, which could result in arcing and thermal failure. In addition to being subject to mechanical wear out, receptacles are also vulnerable to the weather. Rain and splashing from washing, along with dust and dirt, will foul the electrical contacts and lead to corrosion. This can lead to materials failure, resulting in arcing and thermal failure, as well as immediate concerns with shorting to metal parts.

SCE has worked together with industry on development of codes and standards of EV Supply Equipment and associated infrastructure for decades, with a careful focus on personnel safety, functional reliability, and interoperability. The SAE J1772 standard and its implementation as a universal vehicle electrical connection system has seen unprecedented success as a result. This standard provides a reliable and safe connection between the electrical system and the EV, carefully preventing any handling of live parts.

For these reasons, SCE requests that the DSA carefully consider and reject any recommendation to mandate the installation and use of higher voltage (240 volt) receptacles under “EV Ready.” Instead, SCE recommends that the DSA require a solution that is safe and EV Ready, like requiring EV Supply Equipment.

Agency Response:

DSA appreciates the commenter’s support to not accept the ACP proposal as stated above and will take the recommendation under advisement. While the commenter recommended disapprove, DSA believes that the disapproval was intended for the ACP proposal comments and not the DSA proposed EV regulations.

Committer(s) and Recommendation:

4. Shane Diller-representing California Building Officials (CALBO)- support the code change at Section 5.106.5.3.4 Accessible EVCS, which references Section 11B-228.3 of the California Building Code for the scoping of accessible features required for electric vehicle charging stations.

Agency Response:

DSA appreciates the support comment.

Committer(s) and Recommendation:

5. Vanessa Warheit (September 27, 21 coalition letter and two separate emails)- representing EV Charging Access for All Coalition (EVCAA) and 90 organizations, companies, and individuals.

Comments and recommendations: EVCAA recommend the following five high priority code changes:

- 1) Increase the residential EV Ready percentage from 25% to 85%.
- 2) Increase the number of EV spaces to 20% EV Ready and 30% EV Capable for all Non-Residential sites.
- 3) Return missing ALMS language to Non-Residential CALGreen.
- 4) Include prominent signage at all EV Capable/EV Ready parking spaces.
- 5) Include missing retrofit language in Non-Residential CALGreen.

They also recommend the following lower-priority amendments:

- 6) Define DCFC in Non-Residential CALGreen.
- 7) Remove unwarranted exceptions in Non-Residential for Section 5.106.5.3 Exceptions 1b and 2.

recommendations for 2022 Intervening code cycle include:

Consider First Principles for EV Infrastructure in New Construction: for Equity, Low cost at all stages for all stakeholders, dwell time, Direct control over charging access, Signage and true access and ensure high-road jobs.

Additional recommendations for 2024 code cycle include:

1. EV Workplace Charging-use dwell time principles, Recommended Workplace Approach: Pacific Clean Energy/Silicon Valley Clean
2. Energy (PCE/SVCE) Reach Codes,
3. Ubiquity of Application-remove the 10/25 parking space EV exception
4. Flexibility for Builders-by redefining EV capable and requiring signage,
5. Appropriateness of Access-EV regulations based on use and
6. Workforce development - recommendations and benefits-require EV installations by done by a licensed contractor and certification for EV electricians.

Agency Response:

DSA appreciates the comments and data provided. Upon further review DSA has decided not to amend the proposal in response to the comment received. In response to comments items 1 through 4, DSA fully vetted during various workshops

and discussed during the GREEN code advisory committee and garnered wide support by industry and affected parties. For comments to items 5 & 6, DSA may consider the suggestions in future rulemaking cycles. For comments to item 7 Exception 1b, DSA does not accept the comment as the proposed exception is similar to the existing exception in current Section 5.106.5.3.3. EV charging space calculations. For comment to item 7 Exception 2, recommendations for the 2022 Intervening and 2024 code cycles; DSA has decided to not make any additional changes for that exception or provide any new code amendments during this code cycle. However, DSA may review and consider in a future code cycle.

Commenter(s) and Recommendation:

6. Vanessa Warheit-representing herself.

Comment: Increase the number of EV spaces to be 20% EV Ready and 30% EV Capable for all Non-Residential sites, regardless of size, in new construction; Return ALMS language included in earlier iterations of the 2022 code; Require prominent signage at all EV Capable and EV Ready parking spaces; Return the retrofit language that was included in earlier iterations of the 2022 code; Include a definition of DC Fast Charging that requires a minimum of 100kW; Remove the unwarranted exception for mechanical car systems (5.106.5.3 Exception 2).

For non-residential buildings, I ask that you remove the exceptions (1b -Non-Residential) for “Where there is no local utility power supply, or the local utility is unable to supply adequate power.”

Agency Response:

DSA appreciates the comments. Upon further review, DSA has decided not to amend the proposal in response to the comment received. The comments provided are duplicative and DSA has provided a response under commenter 5 above.

Commenter(s) and Recommendation:

7. Dwight MacCurdy (Sacramento Electric Vehicle Association), Guy Hall (Electric Auto Association) and Marc Geller (Plug in America) recommend Approve as Amended.

Comment: In the nonresidential specifications in the current code cycle, the term ALMS has been defined and applied to effectively share power among multiple vehicles, and minimum provisions have been specified. However, it is important that the code supports the variety of topologies that are currently available to deploy ALMS. These include a distributed approach with EVSEs that have more than one connection point, such as ClipperCreek’s HCS-D Dual Charging Station. These EVSEs are capable of managing and sharing one 40 ampere circuit for charging two or more vehicles.

The code in section 5.106.5.3.2 is inconsistent with EVSEs that can manage motion 5.106.5.3.2.

5.106.5.3.2 Electric vehicle charging stations (EVCS). EV capable spaces shall be provided with EVSE to create EVCS in the number indicated in Table 5.106.5.3.1. The EVCS required by Table 5.106.5.3.1 may be provided with EVSE in any combination of Level 2 and Direct Current Fast Charging (DCFC), except that at least one Level 2 EVSE shall be provided.

The commenter states that One EV charger with multiple connectors capable of charging multiple EVs simultaneously shall be permitted and would like to add the verbiage “*if in accordance with 5.106.5.3.3*” and repeal “if the electrical load capacity required by Section 5.106.5.3.1 for each EV capable.”

For the residential and nonresidential code we recommend more clarity in the descriptions used for EV charging. There are several places throughout the BSC and HCD documents where the words “EV Chargers”, EVSE and EVCS are used interchangeably and inconsistently. This is likely to lead to confusion for the Authority Having Jurisdiction and should be corrected.

Agency Response:

DSA appreciates the comments. Upon further review, DSA has decided not to amend the proposal in response to the comment received. The proposed amendment allows one EV charger with multiple connectors capable of charging multiple EVs simultaneously, provided that each EV capable space is supplied with a 30-ampere minimum for each EV space. This proposal does not preclude the installation of the aforementioned EV charger if installed with an ALMS. The intent of the proposal is to require an EV charger to provide 208/240 Volt 40 amperes at each space when not managed by an ALMS.

Commenter(s) and Recommendation:

8. Dwight MacCurdy (Sacramento Electric Vehicle Association), Guy Hall (Electric Auto Association) and Marc Geller (Plug in America) recommend Approve as Amended.

Comment: We commend the DSA for pursuing opportunities to expand EV charging infrastructure for residential and nonresidential new construction in the 2022 CALGreen code cycle.

Automatic Load Management System (ALMS) Recommendations

ALMS is defined in the nonresidential and residential code changes as follows:

AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS). A system designed to manage load across one or more electric vehicle supply equipment (EVSE) to share electrical capacity and/or automatically manage power at each connection point.

For nonresidential specifications in the current code cycle, the term ALMS has been defined and applied to effectively share power among multiple vehicles, and minimum provisions have been specified.

However, it is important that the code supports the variety of topologies that are currently available to deploy ALMS. These include a distributed approach with EVSEs that have more than one connection point, such as ClipperCreek’s HCS-D

Dual Charging Station. These EVSEs are capable of managing and sharing one 40 ampere circuit for charging two or more vehicles.

The code in section 5.106.5.3.2 is inconsistent with EVSEs that can manage more than one connection point. For clarity, the proposed code's use of ALMS and "connection point" terms need to be applied in a consistent manner.

Agency Response:

DSA appreciates the comments. Upon further review, DSA has decided not to amend the proposal in response to the comment received. The proposed amendment that allows for the use of ALMS allows for reduced power. This proposal does not preclude the installation of the aforementioned EV charger as long as the charger is managed by an ALMS which allows for a minimum of 1.7 kw when simultaneously charging.

Commenter(s) and Recommendation:

9. Guy Hall (Electric Auto Association), Dwight MacCurdy (Sacramento Electric Vehicle Association), and Marc Geller (Plug in America) recommend Approve as Amended. *Note: This same comment was submitted by Dwight MacCurdy as an attachment September 27, 2021.*

Comment: For consideration during the next rulemaking cycle, the commenters, state that the code in section 5.106.5.3.2 is inconsistent with EVSEs that can manage more than one connection point. For clarity, the proposed code's use of ALMS and "connection point" terms need to be applied in a consistent manner. They recommend clarifying EVSE with multiple connectors be aligned with the ALMS wording in Section 5.106.5.3.2. Additionally, the commenter states that, for the nonresidential code more clarity in the descriptions used for EV charging. There are several places throughout the DSA documents where the words "EV Chargers", EVSE and EVCS are used interchangeably and inconsistently. This is likely to lead to confusion for the Authority Having Jurisdiction and should be corrected.

Agency Response:

DSA appreciates the comments. Upon further review, DSA has decided not to amend the proposal in response to the comment. The comments mentioned above pertaining to Section 5.106.3.2 and the use of ALMS and EVSEs that can manage more than one connection point are similar to the comments mentioned in comments 7 and 8. Refer to the responses in comments 7 and 8. As for the comment related to terms used in the code proposals for EV Chargers, EVSE and EVCS being used interchangeably and inconsistently, DSA does not agree as some of the terms are existing defined terms and are specifically used as needed in the proposed code changes.

Commenter(s) and Recommendation:

10. Jon Hart (Powerflex) recommend Approve and Approve as Amended.

Note: This same comment was submitted by Jon Hart as an attachment September 27, 2021.

Comment: Powerflex is commenting on the proposed changes:

1. PowerFlex supports the DSA proposed definition of ALMS as written.
2. PowerFlex proposes expanding the definition of Level 2 EVSE to include branch circuits up to 60 amps. We have had several Level 2 EVSE installations with 60-amp branch circuits, so broadening the definition would cover these types of installations. Accordingly, PowerFlex proposes the following definition:

The commenter suggests to change the code language from 208/240 Volt 40 amperes to 60 amperes branch circuit, and the electric vehicle charging connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

3. PowerFlex proposes that DSA adopt the same language to ensure that the codes are not conflicting and that they are clear to EVSE installers/operators:

When Level 2 EVSE is installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The commenter states that the electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS and suggests to add the verbiage *“up to 200% of the required spaces. Beyond 200% of the required spaces, on-site distribution transformers shall have sufficient capacity to deliver at least 1.6 kW simultaneously to each EVCS.”* The branch circuit shall have a minimum capacity of 40 amperes and installed EVSE shall have a capacity of not less than 30 amperes. Commenter also states that ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces and that each EVSE controlled by an ALMS shall deliver a minimum 30 amperes to an EV when charging one vehicle and *“may”* deliver *“less than”* 3.3 kW while simultaneously charging multiple EVs.

Agency Response:

DSA appreciates the support comment and suggested edits. Upon further review, DSA has decided not to amend the proposal in response to the comment received. The comments mentioned above pertaining to Section 5.106.3.3 and the use of ALMS. The commenter is proposing amendment to the Level EVSE definition for HCD to increase the branch circuit from 208/240 Volt 40 ampere to 60 ampere and would like DSA to co-adopt the same proposed change. Additionally, the commenter is proposing an amendment to proposed code language for ALMS and would like DSA BSC and HCD to co-adopt the same proposed change. The proposed minimum power requirement on 208/240 Volt 40 amperes and the ALMS minimum kw power requirements were fully vetted during various workshops and discussed

during the GREEN code advisory committee and internal state agency input and garnered wide support by industry and affected parties.

Commenter(s) and Recommendation:

11. Noalani Derrickson (Tesla) and coalition Dylan Jaff (Electric Vehicle Charging Association), Kristian Korby (California Electric Transportation Coalition), Meredith Alexander (CALSTART), and Steven Douglas (Alliance for Automotive Innovation) recommend Approve and one recommendation for MHD.

Comment: The coalition supports the proposal for the following amendments:

1. We continue to strongly support the proposed increases to EV-capable, EV ready, and EV Supply Equipment (EVSE) installed for both residential and nonresidential building codes, while acknowledging the need for more.
2. We support establishing minimum power levels for nonresidential.
3. We generally support the definition of Automatic Load Management Systems (ALMS) as well as the flexibility and limitations established.
4. 10% EV-capable in existing residential buildings is a critical first step and we recommend considering expanded triggers for both existing residential and commercial buildings.
5. We support the DSA's intent to encourage medium- and heavy-duty vehicle (MHDV) charging and recommend further study and coordination to ensure effectiveness.

Recommendation: we recommend that DSA continue to coordinate with CARB and stakeholders, by holding MHDV specific workgroup meetings on targeted fleet types and vocations, and potentially coordinating with the California Energy Commission and the Lawrence Berkeley National Lab to study the MHDV charging market, so that these code provisions can be amended appropriately in future triennial and intervening code cycles.

Agency Response:

DSA appreciates the support comments for comment items 1-3. Upon further review, DSA has decided not to amend the proposal in response to the comments received for comment items 4 and 5. For item 4, DSA will consider expanding triggers for existing nonresidential occupancies in a future code cycle. For item 5, DSA will review, coordinate with California Air Resources Board and may consider code changes in future code cycles.

Commenter(s) and Recommendation:

12. Peter Mustacich (California Statewide Utility Codes and Standards Team) recommend Approve and one recommendation for MHD.

Comment: On behalf of the California Statewide Utility Codes and Standards Team, we want to make the state agencies aware of a report that we recently published:

"Light-Duty Electric Vehicle Charging Infrastructure Analysis for California's CALGreen Building Code." The report is available for download at the following link: <https://title24stakeholders.com/measures/2022-calgreen/light-duty-ev-charging-infrastructure-costanalysis/>

This report documents data and information provided to California Air Resource Board (CARB) staff as they considered proposals for 2022 CALGreen light-duty EV charging infrastructure requirements for multifamily and nonresidential buildings. The report includes a comparison of EV-infrastructure requirements from 37 local jurisdiction reach codes across California, an EV charging infrastructure cost study comparison from previously published reports, and a summary of existing building EV requirements from local reach codes and select international codes. Finally, recommendations for future code updates are presented, including load shaping to align charging with renewable generation, futureproofing considerations to reduce retrofit costs, improving technical power requirements, considerations for incorporating automatic load management systems, accommodating variations in dwell-times, and filling data gaps to support future code enhancements.

On behalf of the California Statewide Utility Codes and Standards Team, we want to make the state agencies aware of a report that we recently published: "Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure Cost Analysis for Title 24, Part 11 (CALGreen)." The report is available for download at the following link: <https://title24stakeholders.com/measures/2022-calgreen/medium-and-heavy-duty-ev-charginginfrastructure-cost-analysis/>

This report documents data and information provided to California Air Resource Board (CARB) staff as they considered proposals for 2022 CALGreen Medium- and Heavy-Duty (MHD) EV charging infrastructure requirements. The report reviews the regulatory landscape for EV charging infrastructure and outlines the proposed requirements to enable impactful opportunity charging for visiting MHD EVs at loading spaces for grocery, retail, and warehouse building types. A benefits and cost analysis featuring nine scenarios shows that these proposed requirements meet the public benefit purpose of accelerating the electrification of MHD transportation to address GHG reduction and air quality improvement priorities by preparing buildings to host a minimum level of EV charging infrastructure. Further, the new construction requirements will help avoid potentially much more expensive retrofit costs to install the same equipment in the future. The report concludes with recommendations for future work to increase scope and close data gaps.

Agency Response:

DSA appreciates the support comment and suggested recommendations provided in the attached links to consider in future code cycles for recommendations including load shaping to align charging with renewable generation, futureproofing considerations to reduce retrofit costs, improving technical power requirements, considerations for incorporating automatic load management system performance requirements, accommodating variations in dwell-times, and filling data gaps to support future code updates.

Commenter(s) and Recommendation:

13. Phillip Kobernick (Peninsula Clean Energy, MCE, Clean Power Alliance, Redwood Coast Energy Authority, and East Bay Community Energy) recommend Further study.

Comment: The coalition did not specifically provide any comments beyond the recommendation of Further study under criteria 18930(a)3

Agency Response:

DSA appreciates the comment. DSA is not proposing any additional changes based on comments provided.

Section 5.106.5.3 Electric Vehicle (EV) charging

During the 45-day public comment period DSA identified that there was a misspelled word for “infrastructure” which is being corrected in the Final Express Terms for final commission action and to ensure correct spelling for the SOS filing documents. This is an editorial correction, and no formal comment was provided as part of the 45day public comment period.

Item 8 and 9

**Chapter 5, NONRESIDENTIAL MANDATORY MEASURES,
Section 5.504.4.7 Thermal insulation and 5.504.4.8 Acoustical ceilings and wall panels.**

Commenter(s) and Recommendation:

14. Timothy Burroughs from Stopwaste.org, Approve as Amended changes to Sections 5.504.7 and 5.504.7.1 Thermal insulation. And Sections 5.504.4.8 and 5.504.4.8.1 Acoustical Ceilings and Wall Panels to apply to all occupancies.

Made suggestions for future rulemaking cycles

Including:

1. Address ‘embodied carbon’ of building materials. Bring the voluntary Tier 1 section A5.409 measure into the mandatory code for larger buildings and target building materials that have high global warming potential during their manufacturing and installation. And low-Carbon concrete code.
2. Refrigerants. We recommend amending sections 5.508 to include low GWP refrigerants for covered equipment.
3. Recycling/reuse. Make Section A5.408 mandatory, emphasize building material reuse and deconstruction rather than demolition, and consider adding design requirements that allow for universal design, durability, and planning for adaptive reuse of buildings to increase the longevity of newly constructed buildings
4. Resilience. We need efficient, zero-energy buildings that operate without emitting greenhouse gasses.

5. Increase electrification percentage for electric vehicles from 20% to 30% for EV capable spaces and electrification of building energy systems & appliances using clean renewable energy and suggest updating CALGreen to support the full benefits of building electrification.

Agency Response:

DSA appreciates the comments. Upon further review, DSA has decided not to amend the proposal in response to the comment received. DSA may consider the suggestions in future rulemaking cycles.

Item 10

**Chapter 5, NONRESIDENTIAL MANDATORY MEASURES,
Section 5.506 Indoor Air Quality**

Commenter(s) and Recommendation:

15. D. DeAngelis from EBTRON Inc, commented on section 5.506.3 Carbon dioxide (CO2) monitoring in classrooms (DSA-SS)

Made suggestions for clarifying code language

Including:

1. Address building pressurization.
2. Underventilating spaces.
3. Demand control ventilation as a function of CO2 monitoring.

Agency Response:

DSA appreciates the comments. Upon further review, DSA has decided not to amend the proposal in response to the comment. DSA may consider the suggestions in future rulemaking cycles.

15-DAY COMMENT PERIOD

Item 10

**Chapter 5, NONRESIDENTIAL MANDATORY MEASURES,
Section 5.506 Indoor Air Quality**

During the 45-day comment period DSA recognized the need for clarification in some of the language, the need for clarification resulted in the need for an additional 15day comment period.

Commenter(s) and Recommendation:

N/A

Agency Response:

DSA amended the Express Terms to make the editorial corrections. DSA did not

receive any comments on this proposed code change during the 15-day comment period.

DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS

Government Code Section 11346.9(a)(4) requires a determination with supporting information that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, or would be as effective and less burdensome to affected private persons than the adopted regulation, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

DSA has determined that no reasonable alternative considered by DSA or that has otherwise been identified and brought to the attention of DSA would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES:

Government Code Section 11346.9(a)(5) requires an explanation setting forth the reasons for rejecting any proposed alternatives that would lessen the adverse economic impact on small businesses, including the benefits of the proposed regulation per 11346.5(a)(3).

No alternatives were identified to lessen the adverse impact on small business. The DSA has determined that the proposed regulations will have no adverse impact on small businesses. The proposed regulations are technical modifications that will provide clarification and consistency within the code.