Prepared by:

BLACK & VEATCH

S CURVE STRATEGIES

Regulations, Ordinances & Implementation: Best Practices for EV Charger Siting

Prepared for:

EV Charging Infrastructure
Training Series 3 of 5

April 3, 2025

Trainers

Will Einstein

Black & Veatch

April Bolduc

S Curve Strategies

Randy Schimka, PE

S Curve Strategies

Five-Part EV Charging Infrastructure Training Series

1. Strategic EV Charger Site Selection

Best practices for EV charger siting in LA County

COMPLETE

2. Business Models and Financing

EV charging business models, incentives, rebates and financing options

COMPLETE

3. Regulations, Ordinances & Implementation

Streamlining EV charging projects by understanding impacts

TODAY

4. Permitting

Best practices to streamline EV charging project permitting

5. Site Design, Energization & Operation

Best practices in EV charging site design

Agenda

1. Regulation Overview
2. Civil Code: Leases & HOAs
3. CA Building Code
4. Safety Standards
5. ADA Compliance
6. Resources
7. Q&A

Regulations: Assembly Bills

AB 1236

Streamlining Permitting

Requires all CA cities and counties to develop an expedited, streamlined permitting process for EV charging stations.

Key Provisions:

- EV charging stations meet applicable health and safety standards imposed by state and local permitting authorities.
- Local agencies must approve installations
  - Unless they can demonstrate a specific adverse impact on public health or safety that cannot be mitigated.

Impact:

- Easier to install EV charging across the state.

AB 970

Improving Deployment Timelines

Builds upon AB 1236 by adding specific timelines for local jurisdictions to review and approve EV charging station permit applications.

Key Provisions:

- Application review timelines.
- Permit approval timelines.

Impact:

- Reduces delays caused by administrative bottlenecks.

Regulations: Assembly Bills

AB 1100

Standardizes EV Parking Spaces

Ensures EV charging infrastructure is counted as standard parking spaces to comply with minimum parking requirements.

Key Provisions:

- Requires jurisdictions to count EV charging spaces as at least one standard space.
- Streamlined development removes need for additional parking spaces.

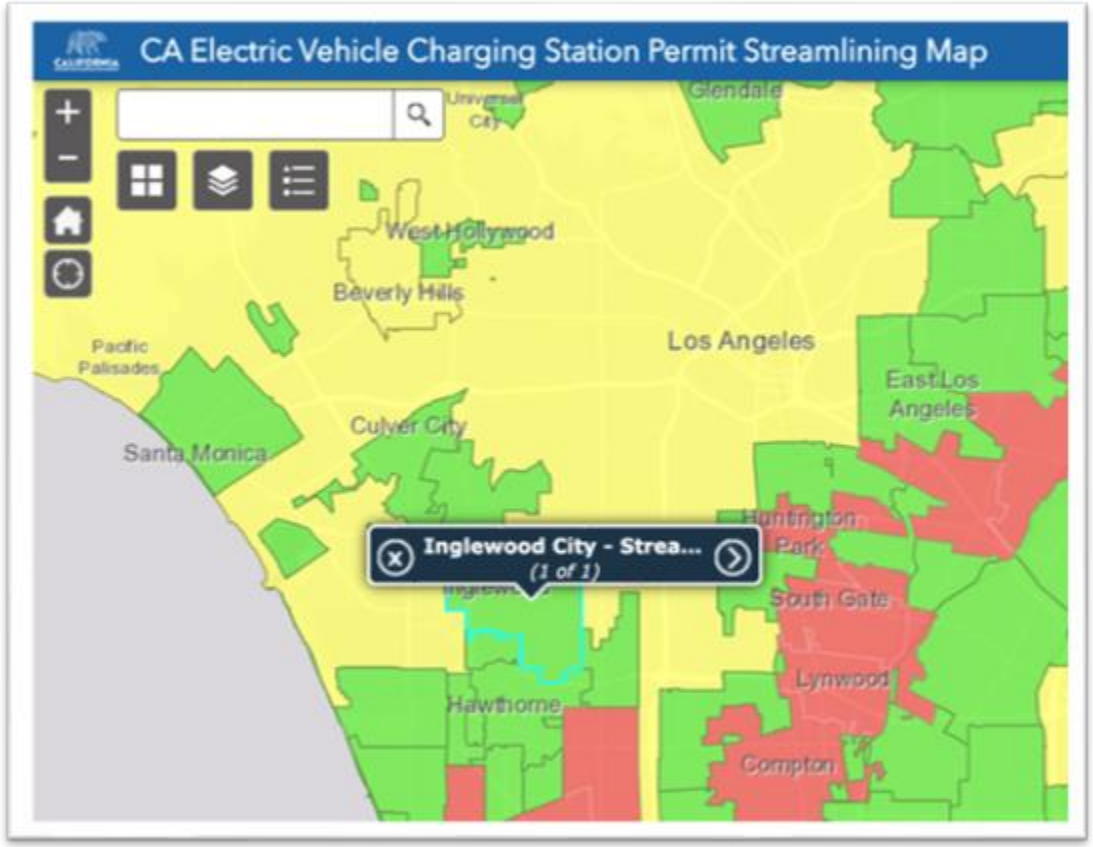
Impact:

- Reduces costs and complexity.
- Allows developers to focus on installing chargers without being penalized by additional parking mandates.

Regulations mandate proactive planning.

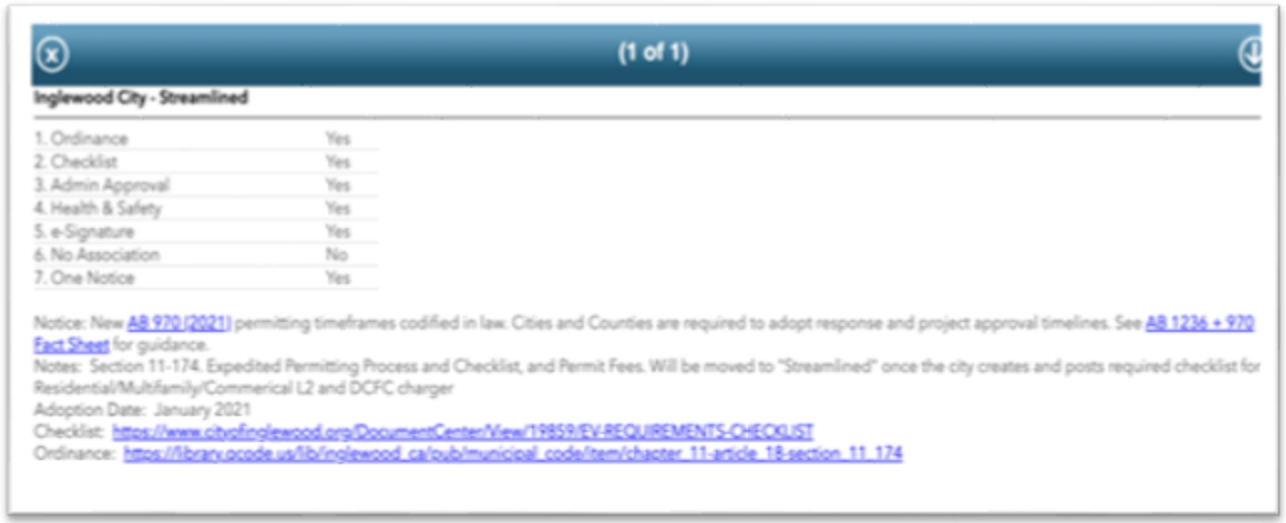
AB 1236: Finding Codes - CA Go Biz

CA Go Biz Map of Inglewood City



Source: CA.gov

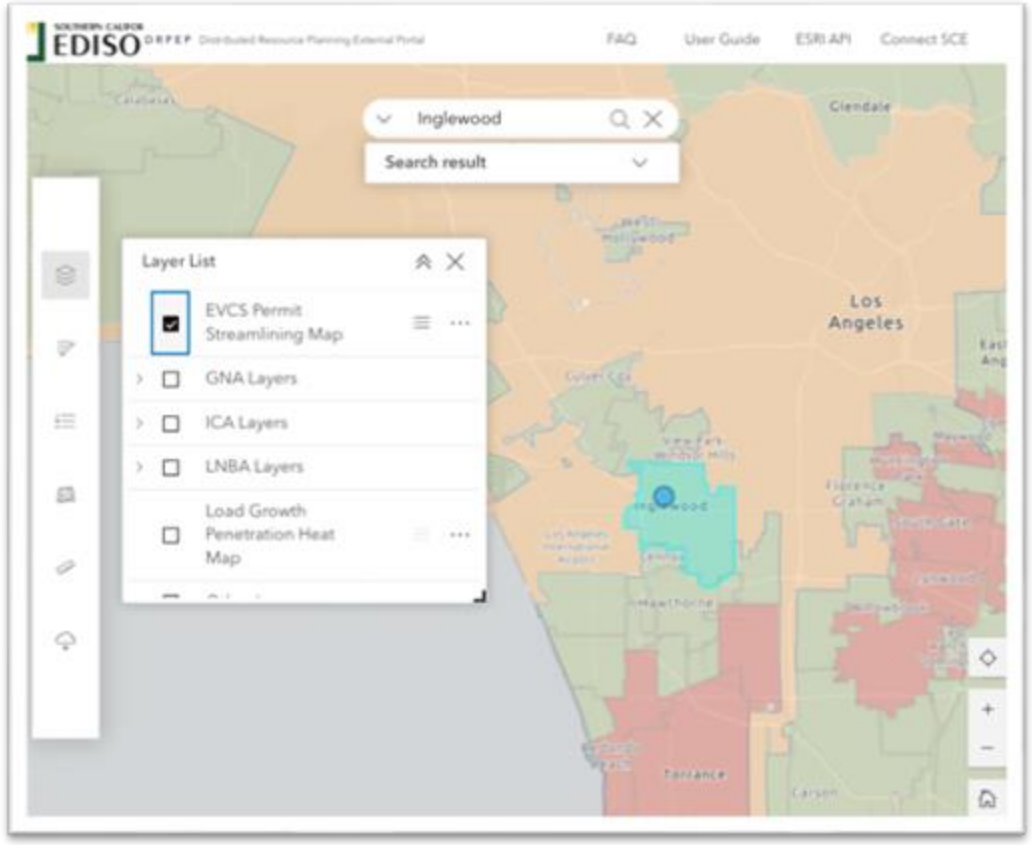
Inglewood City's Streamlining Efforts



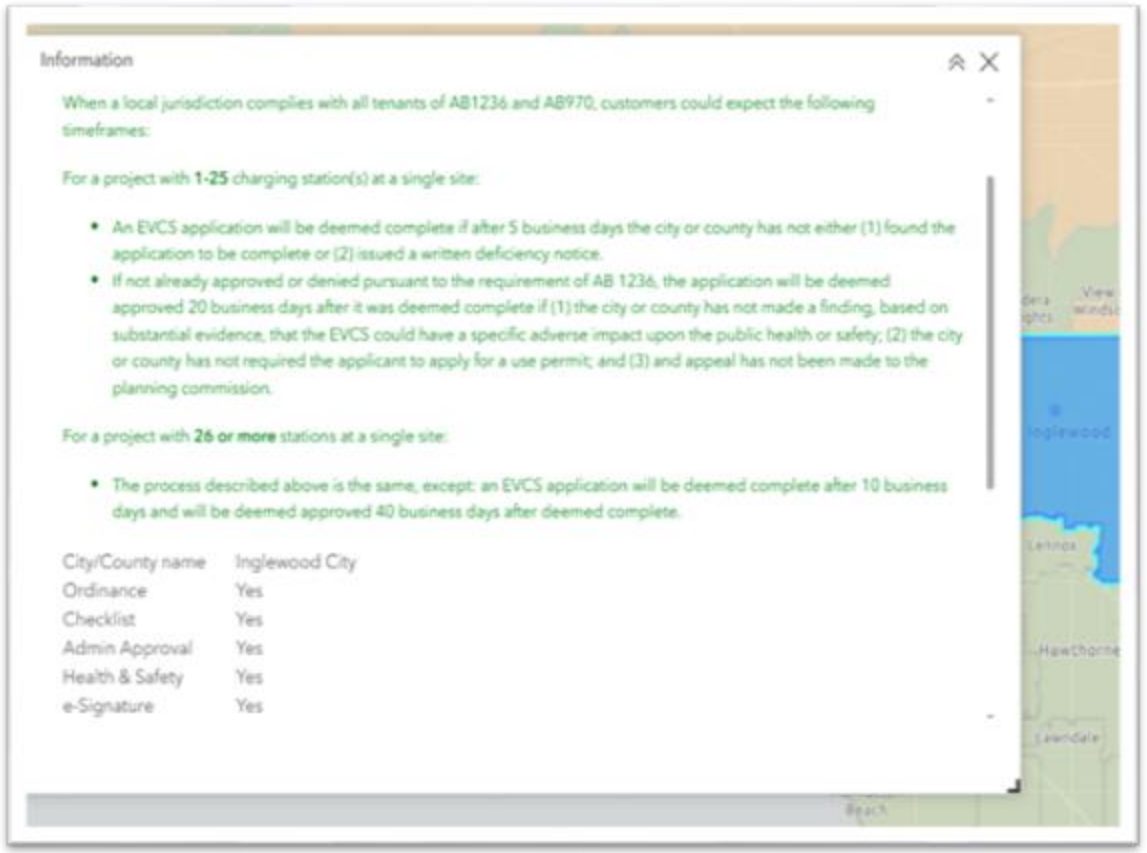
City of Inglewood demonstrates they are streamlined by providing links to a fact sheet, checklist, and ordinance.

AB 1236: Finding Codes - SCE Map

SCE's map layers capacity planning with CA Go Biz.



Map provides additional permitting details.



Source: SCE Distributed Resource Planning External Portal

SCE’s map is a one-stop-shop for EV charging installation capacity and permitting.

AB 970: Improves Deployment Timelines

Application Review Deadlines

5 business days for smaller projects (1–25 charging stations)

10 business days for larger projects (26+ charging stations)

01

Permit Approval

+20 business days to approve or deny permits for smaller projects

+40 business days for larger projects

02

Automatic Approval

If a jurisdiction fails to act by the deadlines, the permit is automatically approved.

Ensures projects are not stalled due to administrative delays.

03

Parking Space Requirements

Prohibits jurisdictions from requiring applicants to replace parking spaces eliminated to accommodate EV chargers.

04

AB 970 builds upon the AB 1236 permit streamlining framework by adding strict timelines for local jurisdictions to review and approve EV charging station applications.

Regulations: State Funded EV Charging Projects

740.20

Regulation of Public Utilities: Rates

Mandates Electric Vehicle Infrastructure Training Program (EVITP) training for personnel working on EV charging projects funded by the California Public Utilities Commission, the California Energy Commission or the State Air Resources Board.

Key Provisions:

- Installations with stations less than 25 kW each:
  - One electrician must have EVITP training.
- Installations with stations over 25 kW each:
  - 25% of electricians must have EVITP training.

Impact:

- Safer EV charging job sites.
- Safer ongoing operation and maintenance of EV charging equipment due to the specialized EVITP training and materials.

EVITP training makes EV charging station installations safer during installation and beyond

Regulations: State Funded Projects

- Charging stations installed using state incentive funding must meet a 97% operational uptime
  - Includes all downtime for maintenance, repairs or unexpected outages
- Operators are required to provide real-time data on charger availability
- Failure to comply results in penalties or loss of incentive funding

Key Insight:

- Uptime reporting ensures better charging station reliability and equitable access across income levels

Source: California Energy Commission Standards (2025)

Case Study: Training Required

KEY CHALLENGE

Drivers reported non-working chargers across the state due to installation and equipment issues, and lack of regular maintenance.

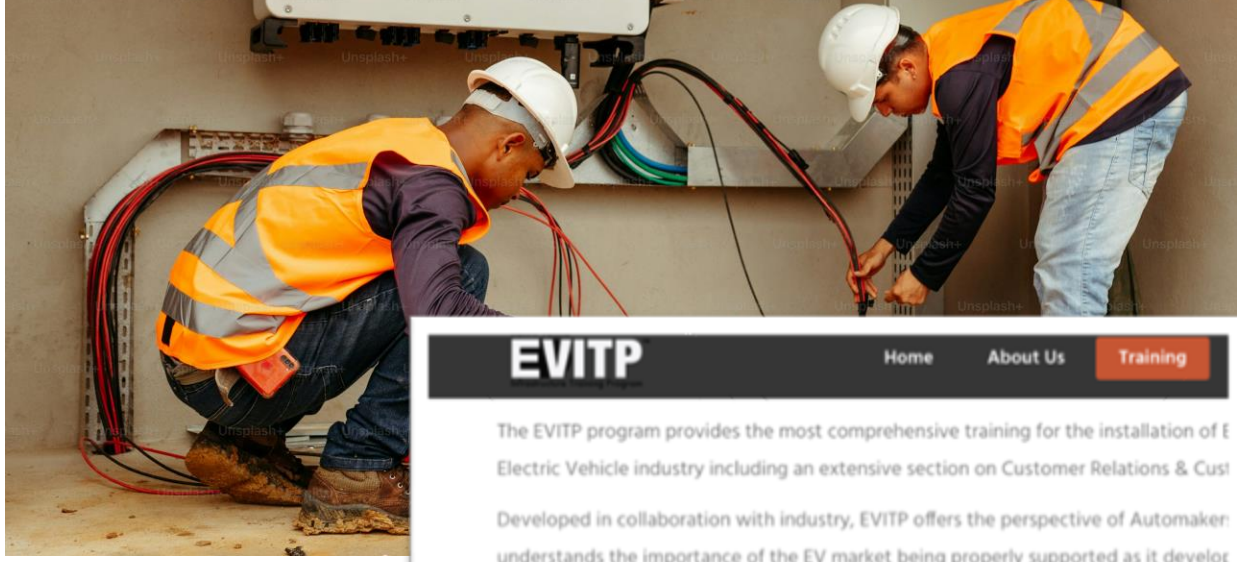
SOLUTION

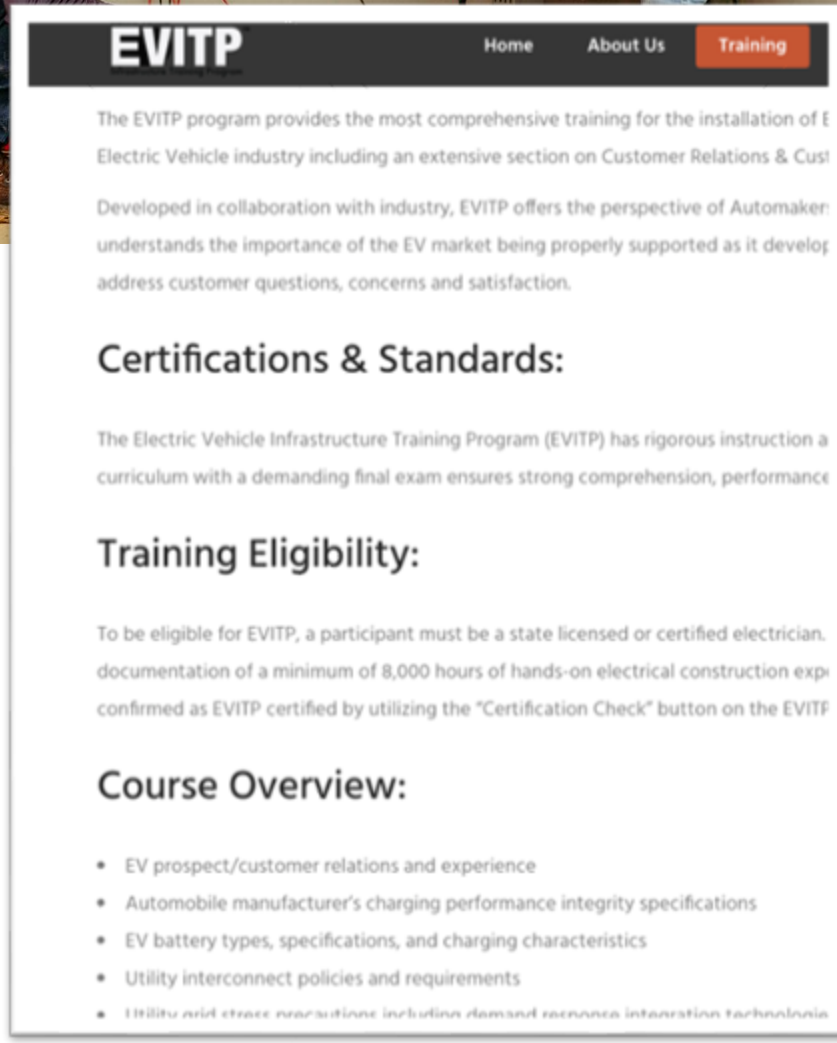
CPUC and the CEC now require specialized training on state-funded projects:

- EVITP provides installation and maintenance safety training
  - Installations less than 25kW each, one electrician must now have this training
  - Installations over 25kW each, 25% of the crew must have this training

OUTCOMES

- Increase in charging station up time, due to 97% requirement
- CA's electrical infrastructure is compatible with the increased EV charging power requirements
- CA's updated electrical codes combined with EVITP training enforces rigorous safety standards
- Reduces the risk of electrical connection issues and overloads





Source: EVITP

Civil Code: Leases & HOAs

Commercial Leases: §§ 1952.7

Prohibits lease terms that unreasonably restrict the installation or use of EV chargers in commercial parking spaces.

Unenforceable Leases

- Leases that prohibit EV charger installations are void and unenforceable.
- Landlords may impose safety standards approval processes.

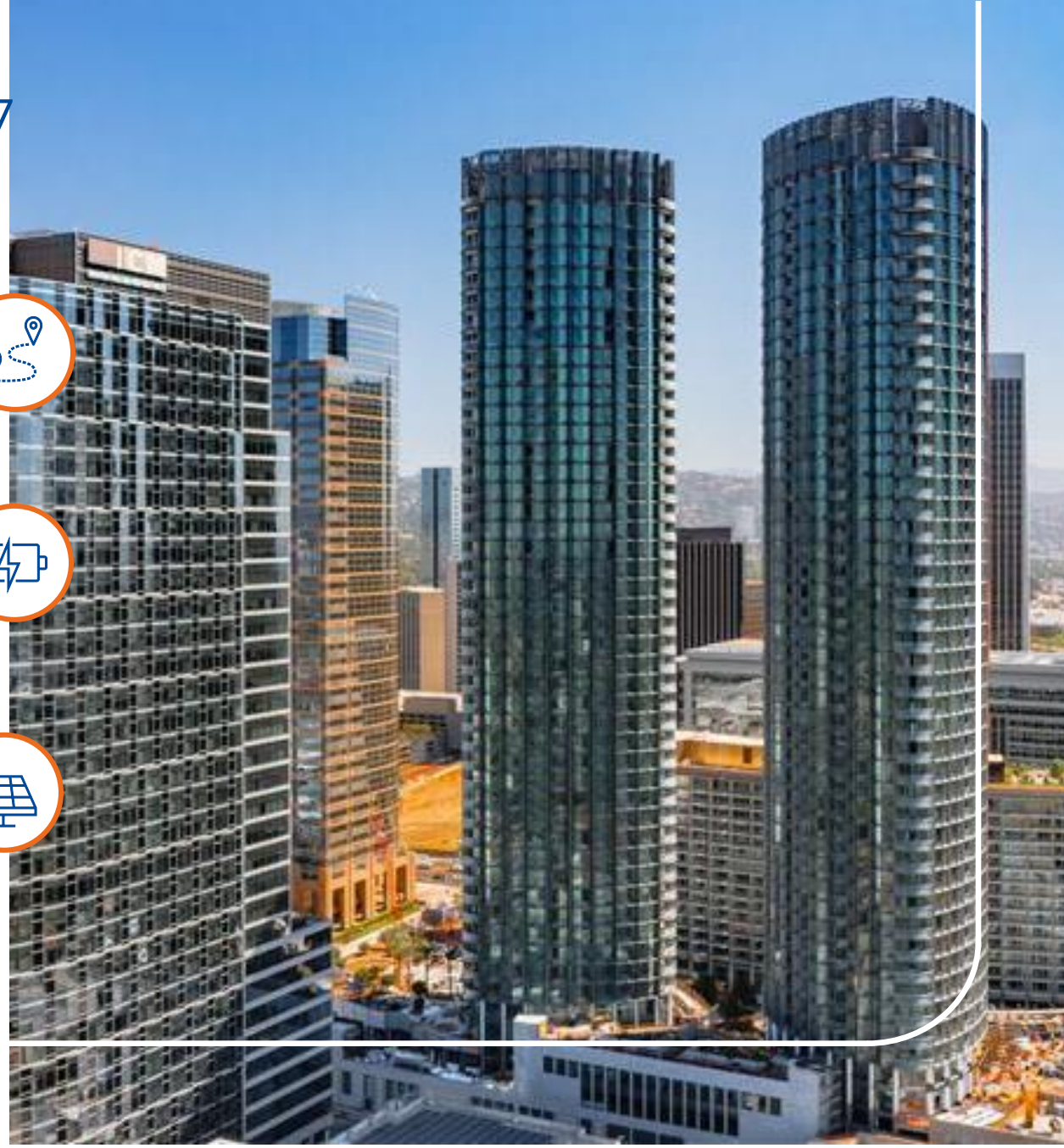
Tenant Responsibilities

Costs for installation, maintenance, repair, removal, and electricity usage of the charging station.

Exemptions

Does not apply to properties with fewer than 50 parking spaces or where EV chargers already exist in sufficient ratios

- 2 chargers per 100 parking spaces



Residential Leases: §§ 1947.6

Landlords must approve a residential lease tenant's written request to install EV chargers at a parking space allotted to the tenant.

Approval Requirements

Unless specific exemptions apply

- Fewer than five parking spaces, rent-controlled properties, or sufficient ratios of existing EV chargers.

Tenant Responsibilities

Costs associated with installation, maintenance, repair, removal, and electricity usage of the charging station.

Exemptions

Does not apply to properties where:

- Parking is not included in the lease
- EV chargers already exist in sufficient ratios
  - 10% of designated parking spaces

HOAs: § 4745

Governs EV charging installations in common areas.

Key Provisions

- Prohibits imposing restrictions that significantly increase the cost of installing a charging station.
- Must process applications for EV charger installations the same way as other architectural applications.
- 60 days to approve or deny applications
    - Or they are deemed approved -- unless additional information required

Owner Responsibilities

All costs associated with installation, maintenance, repair, removal, and electricity use of the charging station.

Must comply with health and safety standards and HOA rules.

California Building Code

What is the CA Building Code?

Where EV charging regulations reside:

- The CA Building Code is part of Title 24, CA Code of Regulations:
  - Updated every three years
  - Current version: 2022 (effective January 1, 2023)
  - Includes the CA Green Building Standards Code (CALGreen)
- CALGreen:
  - Addresses sustainability
  - Sets mandatory EV charging requirements for construction projects

CALGreen

Terminology used in the code related to EV charging:

- EV Capable Space
  - Future:
    - Space with electrical panel capacity and raceways for future EV charging
- EV Ready Space
  - Now:
    - Space with a dedicated branch circuit and receptacle or charger installed
- EV Charging Station
  - Fully operational charger
  - Level 2 or DC Fast Charging
- Level 2 Charger
  - 208/240V, 40-amp circuit for charging
  - Standard for most requirements
- Low Power Level 2 (New)
  - 208/240V, 20-amp minimum circuit

CA Building Code: CALGreen 2022

Residential (Single-Family & Duplexes)

- New homes with attached garages: Must be EV Capable (conduit and panel capacity for Level 2)
- Exception: If local utility infrastructure can't support, may be waived

Multifamily, Hotels, and Motels (New Construction)

- 10% of parking spaces must be EV Capable
- 25% of spaces must be EV Ready w/low power Level 2 receptacles
- 5% of parking spaces in buildings with 20+ units require Level 2 chargers

Nonresidential (New Construction)

- Based on parking count (CALGreen Table 5.106.5.3.1):
  - Updated requirements in table
  - 201+ spaces: 20% of total spaces must be EV Capable spaces, 25% of those must have chargers

TABLE 5.106.5.3.1

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE) [2 & 3]
0-9	0	0
10-25	4	0
26-50	8	2
51-75	13	3
76-100	17	4
101-150	25	6
151-200	35	9
201 and over	20 percent of actual parking spaces [1]	25 percent of EV capable spaces [1]

1. Calculation for spaces shall be rounded up to the nearest whole number.
2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count toward the total number of required EV capable spaces shown in column 2.
3. At least one Level 2 EVSE shall be provided.

Source: CALGreen

Source: 2022 CBC CALGreen EV Charging Requirements (Effective January 1, 2023):

CA Building Code: CALGreen 2024

New Multifamily, Hotels, and Motels

- Increased requirement:
  - 40% of parking spaces must have low-powered EV charging receptacles
- 10% of spaces must have operational Level 2 chargers
  - With at least 50% using a standardized connector
- Power source mandate:
  - Multifamily EV charging receptacles shall connect to unit's electrical panel (unless infeasible)

Existing Multifamily Buildings

- 10% of spaces added or altered must be EV Capable
- Service panel directory shall identify overcurrent protective device spaces reserved for future EV charging and labeled as "EV Capable"

Source: 2024 CBC CALGreen EV Charging Requirements (Effective July 1, 2024)

CA Building Code: CALGreen 2024

Residential and Commercial

- New construction projects must include pre-wiring for Level 2 chargers
- New commercial buildings:
  - 15% of parking spaces must be EV Capable, and 5% must have operational charging stations
- Public facilities must include accessible EV chargers based on total parking spaces
  - One accessible EV charging station based on every four installed

Source: 2024 CBC CALGreen EV Charging Requirements (Effective July 1, 2024)

CA Building Code: 25/26 Changes

Assembly Bill 1738 (Effective January 1, 2025)

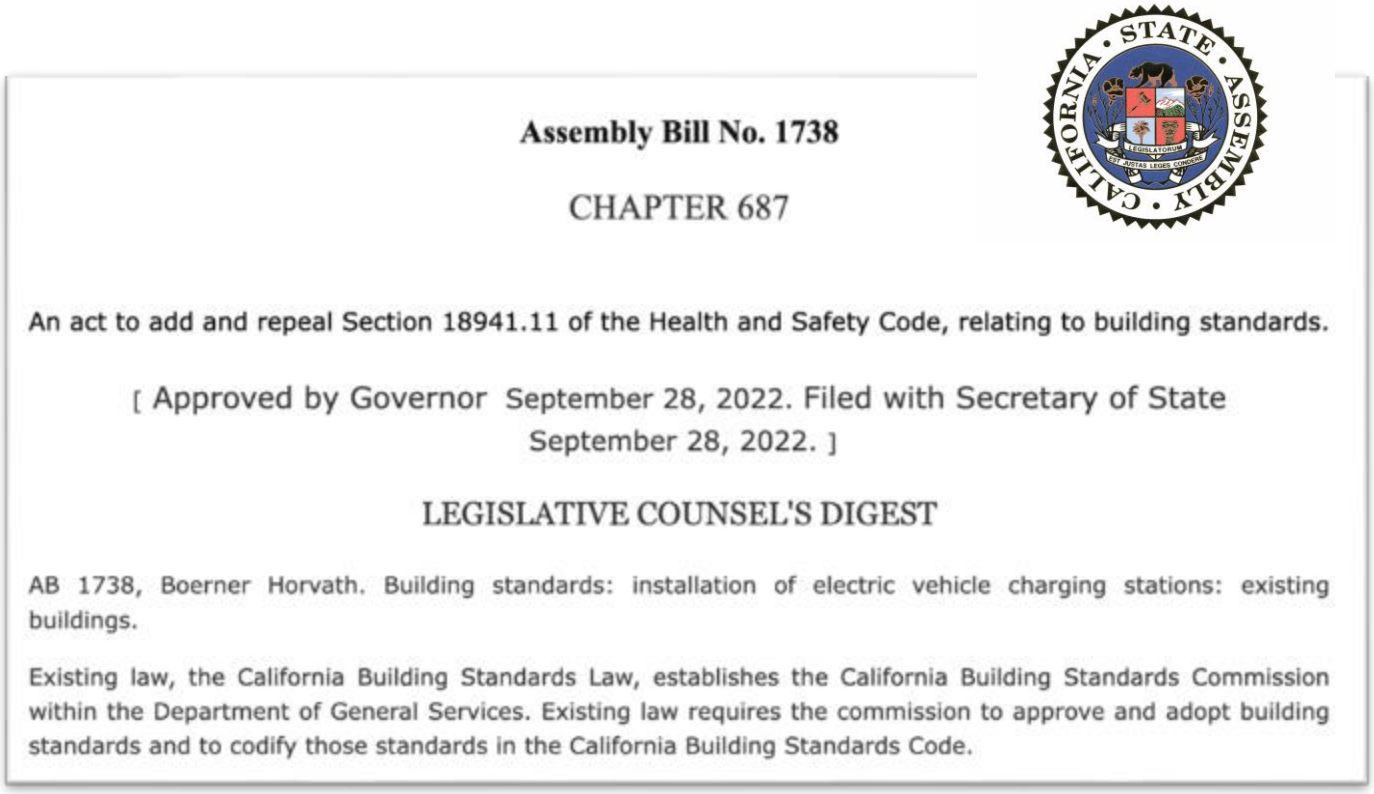
- Department of Housing and Community Development must propose regulations for charging in existing building parking facilities
- Likely to mandate Level 2 charging via retrofits by 2026

2025 California Building Code Cycle (Proposed 2026)

- New multifamily units:
  - 1 EV Ready space per unit
  - 240V/20A minimum, power sharing allowed at 3.3kW
- Applies to new parking additions or alterations requiring permits
- Addresses charging access for apartment dwellers
  - 1/3 of CA residents

Statewide Objective

- CEC target:
  - 2.1 million chargers by 2035 (public + shared private



Assembly Bill No. 1738

CHAPTER 687

An act to add and repeal Section 18941.11 of the Health and Safety Code, relating to building standards.

[Approved by Governor September 28, 2022. Filed with Secretary of State September 28, 2022.]

LEGISLATIVE COUNSEL'S DIGEST

AB 1738, Boerner Horvath. Building standards: installation of electric vehicle charging stations: existing buildings.

Existing law, the California Building Standards Law, establishes the California Building Standards Commission within the Department of General Services. Existing law requires the commission to approve and adopt building standards and to codify those standards in the California Building Standards Code.

Source: CA Legislature

Case Study: California Building Code

KEY CHALLENGE

Understanding the EV charging requirements of a new commercial property with 400 parking spaces.

SOLUTION

- 20% or 20 spaces must be EV Capable
- 25% or 5 of those spaces must have chargers installed
- One installed DCFC can reduce the EV Capable space count by five

OUTCOME

- Planning for charging infrastructure requirements during initial construction increases project costs slightly in the short-term.
- Doing this work now, will significantly reduce future infrastructure upgrade costs in the long-term.

Safety Standards

Safety

Electrical Safety Standards

Mandatory for all electrical aspects of installations

Grounding and bonding requirements

Breakers, wire and conduit sizing

01

Fire Code & Risk Mitigation

Fire safety

Ventilation

Clear access

02

Environmental Impacts

Materials selection

Preventing stormwater runoff

Noise control

03

Regular Inspections & Maintenance

Routine checks

Maintenance protocols

04

Prioritize safety to comply with regulations and ensure the well-being of drivers and the surrounding community.

National Electrical Code - Article 625

EV Charging and Power Export:

- Conductive, Inductive, and Wireless

Key Terms:

- Electric Vehicle Supply Equipment, Wireless Power Transfer
- Conductive, Inductive, and Wireless

Equipment:

- Must be listed
- Marked "Ventilation not required" for indoor use

Safety:

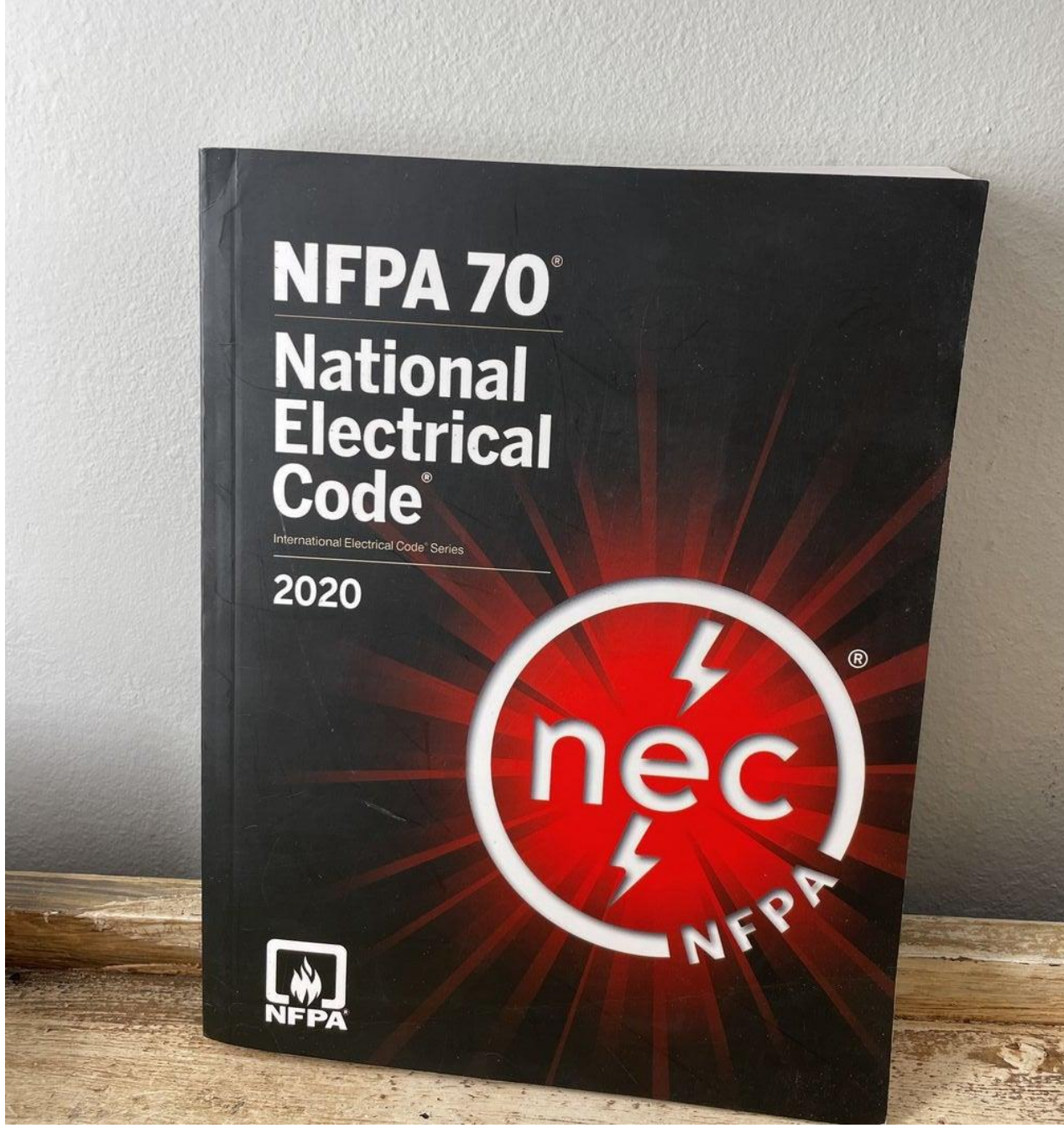
- Shock Protection required
- Disconnect switch required for > 60A or >150v

Installation:

- Individual branch circuit per outlet
- Height 18" indoor, 24" outdoor

Wiring and Conduit:

- Tables for proper wire and conduit size



Case Study: Battery Storage - Fire Safety Mitigation

KEY CHALLENGE

A permit application was submitted to the County of LA for an EV charging installation with a battery storage system.

The design had several issues:

- Exceeding standard size limits for the proposed footprint
- Location closer to the lot line than allowed
- Design lacked a compliant fire-alarm and suppression system

SOLUTION

- The County required additional safety measures, such as smoke and gas detection systems.
- Project underwent an Alternative Materials and Methods Request process to size and separation deficiencies.
- Required advanced modeling to assess potential hazards and ensure emergency responders could safely mitigate incidents.

OUTCOME

- The County ensured the project met the highest safety standards while supporting the sustainable energy goals of the charging and battery project.

ADA Compliance

ADA Compliance

Standards

Unobstructed pathways

Wheelchair maneuvering

Height and reach ranges

01

Design & Placement

Proximity to chargers

No contortion or stretching

Clear signage

Use accessibility experts

02

Document & Verify

Maintain design records

Perform regular audits

Allow driver feedback

03

Training & Awareness

Educate staff

Signage

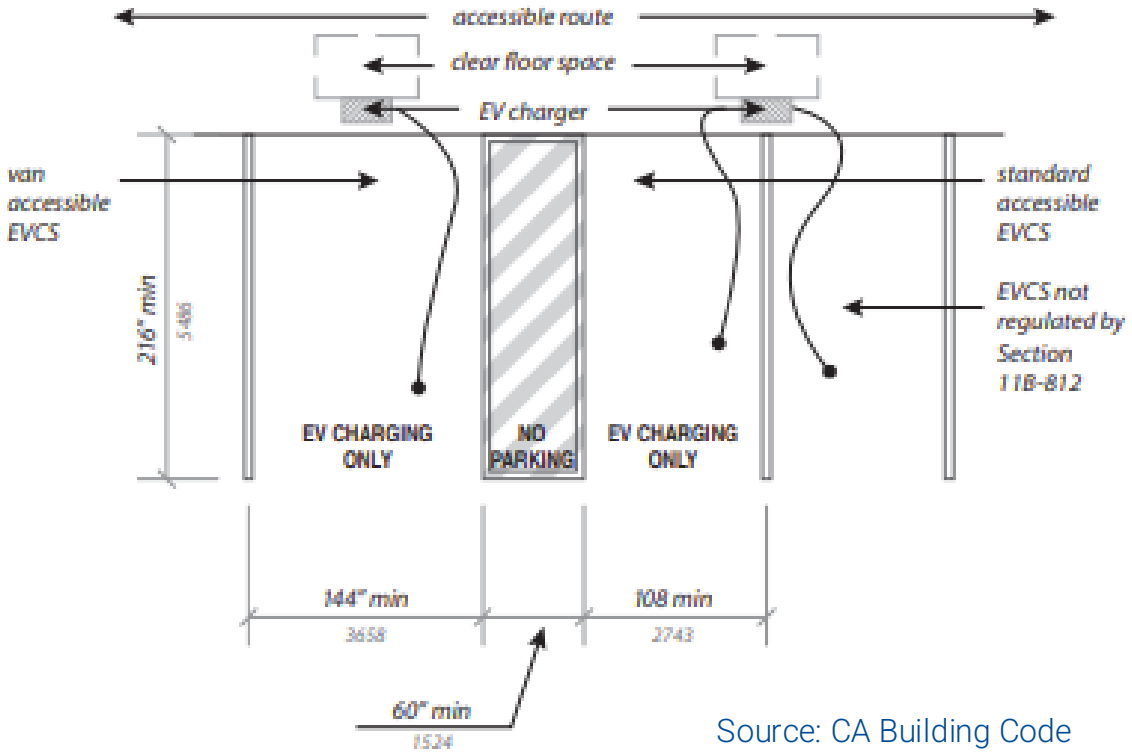
Provide clear driver instructions

04

Incorporate universal design principles to benefit all users.

ADA Design

EV charging must comply with Section 11B-812 of the CA Building Code, which integrates accessibility requirements outlined in Section 11B-228.3.



Source: CA Building Code

Stay updated with any changes to ADA regulations to maintain compliance.

Case Study: ADA Requirements

KEY CHALLENGE

An installation with 14 Level 2 chargers was planned for an existing office. Space is limited, and they need help with an ADA compliant design to maximize the usable footprint and minimize costs.

SOLUTION

- CBC 11B-228.3 states two ADA spots are required
  - A larger van accessible space and a standard accessible space.
- The two ADA spots are best served with single-port chargers.
- Six dual-port chargers are recommended for the adjacent spots to minimize trenching and installation costs.
- The site is **exempt** from the ADA path of travel requirement since the new chargers will be installed at an existing facility where vehicle charging is not a primary function (CBC 11B-202.4 exception #10).
- The lot is level, no regrading is needed to achieve the +/-2% leveling requirement.
- Note: If this installation were for a private fleet, ADA rules don't apply.

OUTCOME

- A least cost solution that is fully compliant with ADA requirements.

	Van Accessible	Standard Accessible	Ambulatory
1 to 4	1	0	0
5 to 25	1	1	0
26 to 50	1	1	1
51 to 75	1	2	2
76 to 100	1	3	3
101 and over	1, plus 1 for each 200, or fraction thereof, over 100	3, plus 1 for each 60, or fraction thereof, over 100	3, plus 1 for each 50, or fraction thereof, over 100

10. Alterations solely for the purpose of installing electric vehicle charging stations (EVCS) at facilities where vehicle fueling, recharging, parking or storage is a primary function shall comply with Section 11B-202.4 to the maximum extent feasible without exceeding 20 percent of the cost of the work directly associated with the installation of EVCS. A "primary function" is a major activity for which the facility is intended.

Alterations solely for the purpose of installing EVCS at facilities where vehicle fueling, recharging, parking or storage is not a primary function shall not be required to comply with Section 11B-202.4

Source: California Building Code 2022

Key Take-aways

Key Take-aways

1. Use resources to streamline permitting

CA Go Biz and SCE maps can quickly locate permitting in LA County jurisdictions.

2. Build safety into your installation plan

The nonprofit EVITP is a good training resource and is required to work on state-funded projects.

3. ADA building codes are required

Stay updated with changes to ADA regulations to maintain compliance.

4. CA building codes are required

State Regulations vs. Building Codes: California's EV charging infrastructure rules involve both state regulations (legislative laws) and the CA Building Code (CalGreen) (technical standards).

Resources

Resources

CA EV Assembly Bills

AB 1236 and AB 970 Fact Sheet to Streamlining Permitting: https://business.ca.gov/wp-content/uploads/2021/11/EV-Charger-Permit-Streamlining-AB-1236-Fact-Sheet-Version-1.pdf

AB 970 Legislation: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB970

AB 1100 Legislation: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB1100

All CA EV Laws: https://afdc.energy.gov/fuels/laws/ELEC?state=ca

Training

EVITP: https://evitp.org/

Maps to Find Local Codes

CA Go Biz: https://california.maps.arcgis.com/apps/webappviewer/index.html?id=5b34002aaffa4ac08b84d24016bf04ce

SCE Distributed Resource Planning External Portal: https://drpep.sce.com/drpep/

LADWP Load Capacity Map: https://ladwp-power.maps.arcgis.com/apps/webappviewer/index.html?id=290be9aa52694ef39bf3088940079f62

CA Building Code

CA ADA Building Code: https://www.dgs.ca.gov/-/media/Divisions/DSA/Publications/access/EVCSPresentation_04-07-17p.pdf?la=en&hash=C9929A80D195299DF7FB1C3B78A589824305C79E

LA County - Internal Services Department

EV Information and 5-Part Webinar Series: https://isd.lacounty.gov/electric-vehicles-and-charging-stations/

Questions & Answers

- Type your questions in the Q&A
- Today's recording and 5-Part Training Series

  https://isd.lacounty.gov/electric-vehicles-and-charging-stations/

- Register for Parts 4 and 5
  - Permitting (April 23)
  - Site Design, Energization, and Operation (May 15)

Thank You!

Laura Iannaccone or Jennifer Caron
Los Angeles County, Internal Services Department,
Clean Transportation and Energy Team

evprogram@isd.lacounty.gov