



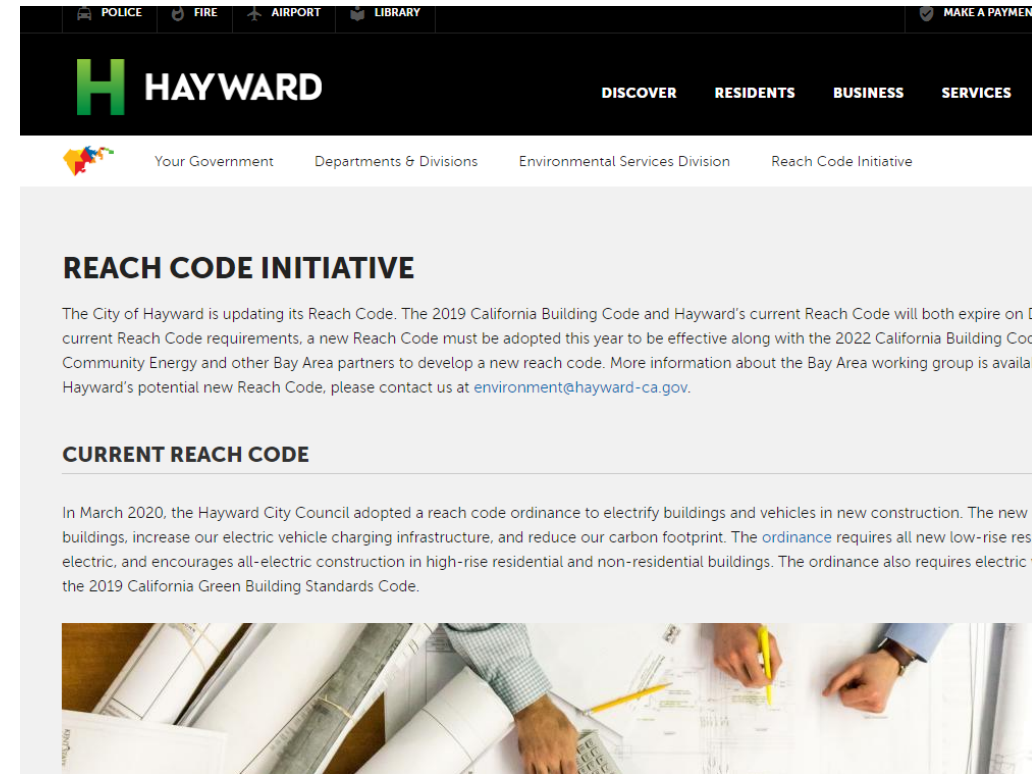
Council Sustainability Committee

2023 Reach Code

May 9, 2022

Hayward's Current Reach Code

- Modifies the California Building Code
- Adopted by Council March 3, 2020
- Approved by California Energy Commission on June 10, 2020



<https://www.hayward-ca.gov/reach-code>

Hayward Reach Code – Requirements

Single-family and Multi-family Residential (up to 3 stories)

- Must be all-electric

Non-residential and High-rise Residential

- Can be all-electric or mixed-fuel. Mixed-fuel buildings must have additional solar and energy efficiency.

Enhanced EV Charging required for all Building Types.

Current Reach Code Expiring

The 2022 California Building Code has been approved and will take effect January 1, 2023.

To continue Hayward's current Reach Code requirements, a new Reach Code must be adopted this year to be effective along with the 2022 California Building Code in January 2023.

Potential Reach Code Components

1. New Low-Rise Residential Buildings
2. New Non-residential & High-Rise Residential Buildings
3. New Accessory Dwelling Units
- ~~4. Existing Buildings (not addressed in Hayward's current code)~~
- ~~5. End of Flow~~
- ~~6. Existing Residential (not addressed in Hayward's current code)~~
7. EV Charging Requirements

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7. EV Charging Requirements





New Nonresidential & High-Rise Residential Buildings

- Currently, new non-residential and high-rise residential buildings can be either all-electric or mixed-fuel.
- Staff recommends eliminating the mixed-fuel option.
- Possible exceptions to all-electric requirement:
 1. Allow gas for certain industrial purposes
 2. Allow gas for restaurants.

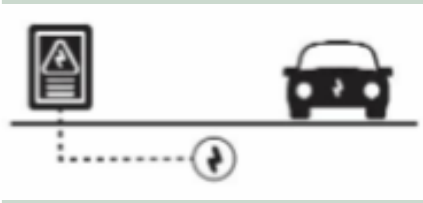
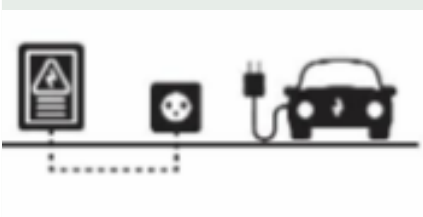

CEQA Thresholds of Significance

- Adopted by Bay Area Air Quality District on April 20, 2022
- To meet state's goal of Carbon Neutrality by 2045, new buildings must either:
 1. not include natural gas; or
 2. be consistent with a local climate action plan (CAP).

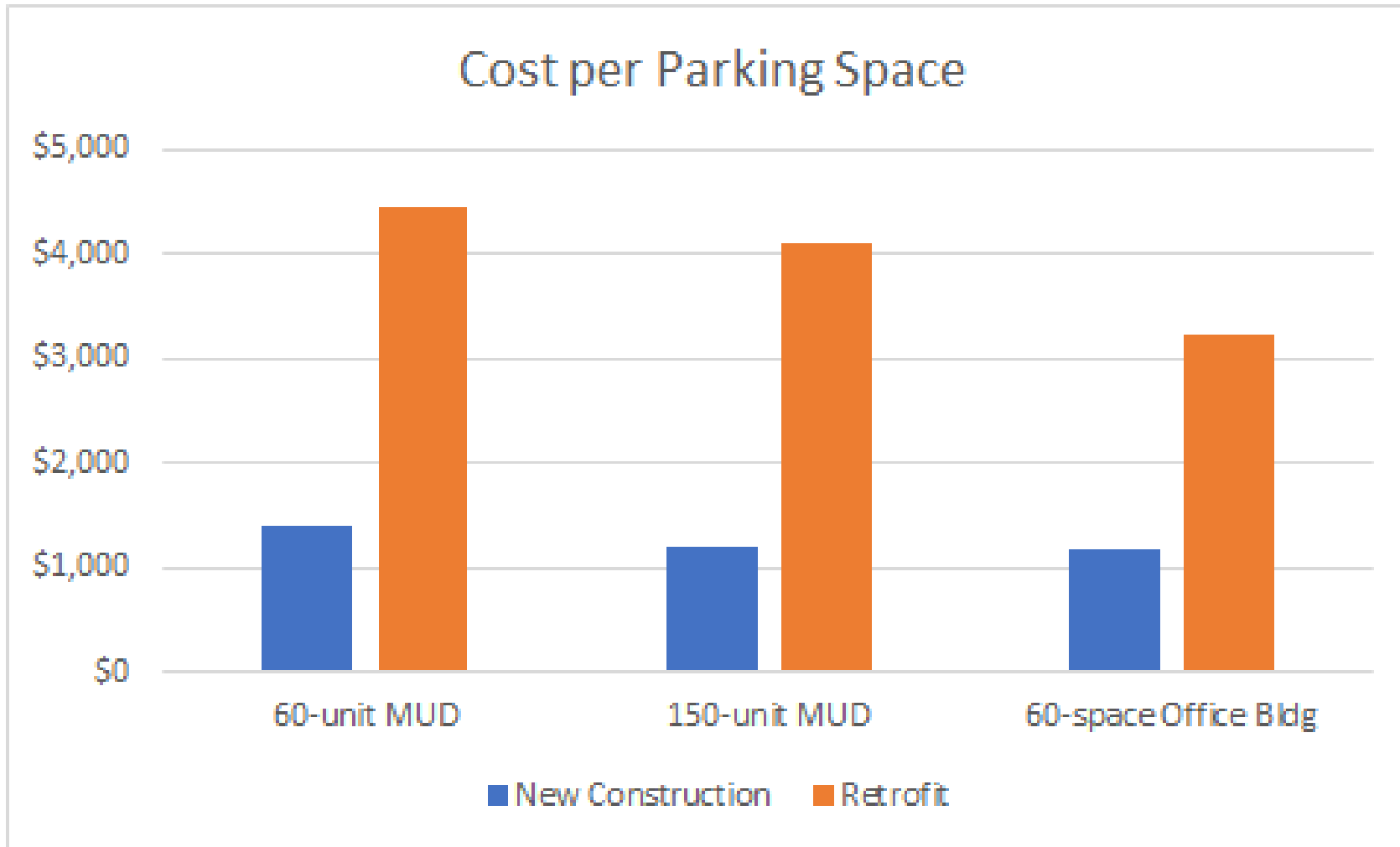
Electric Vehicle Charger Types

Level 1		15-20 Amp, 120 Volt (standard household outlet) Driving Distance provided: 3-4 miles/hour
Low Power Level 2		20 Amp, 208/240 Volt Driving Distance provided: 10-15 miles/hour
High Power Level 2		40+ Amp, 208/240 Volt Driving Distance provided: 25-30 miles/hour
DC Fast Charge		80-400 Amp, 200-600 Volt DC (direct current) Driving Distance provided: 125-1000 miles/hour

EV Charging Readiness

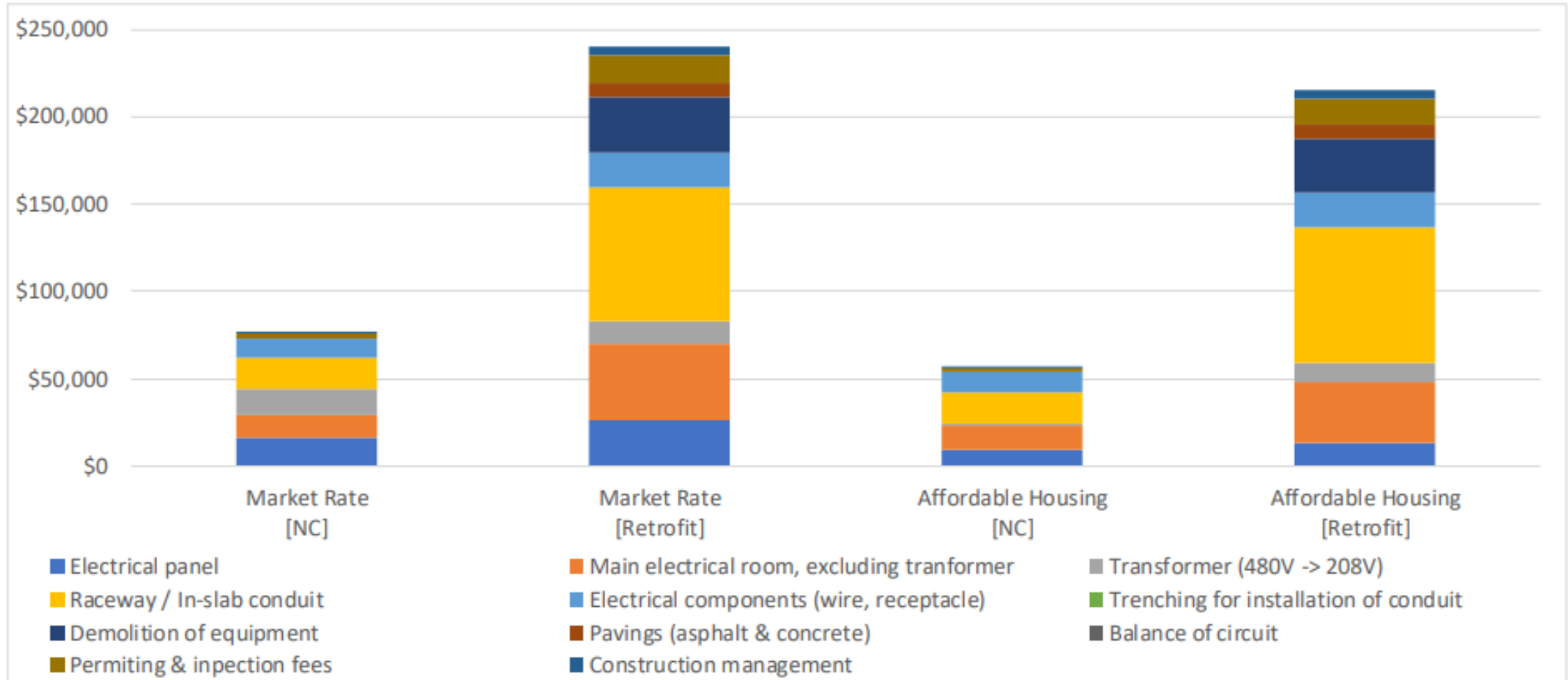
EV Capable		Raceway (conduit), electrical capacity (breaker space)
EV Ready		EV Capable + overcurrent protection devices, wiring and outlet (i.e. full circuit)
EVCI or EVSE		All equipment to deliver electricity to EV EVSE = Electric Vehicle Supply Equipment EVCI = Electric Vehicle Charger Installed

Electric Vehicle Charging - Cost of New vs. Retrofit



Electric Vehicle Infrastructure Cost Analysis Report for PCE and SVCE
Pacific Gas and Electric Company EV Charge Network Quarterly Report, Q1 2019

Cost for 60-unit Multi-family Residential Project



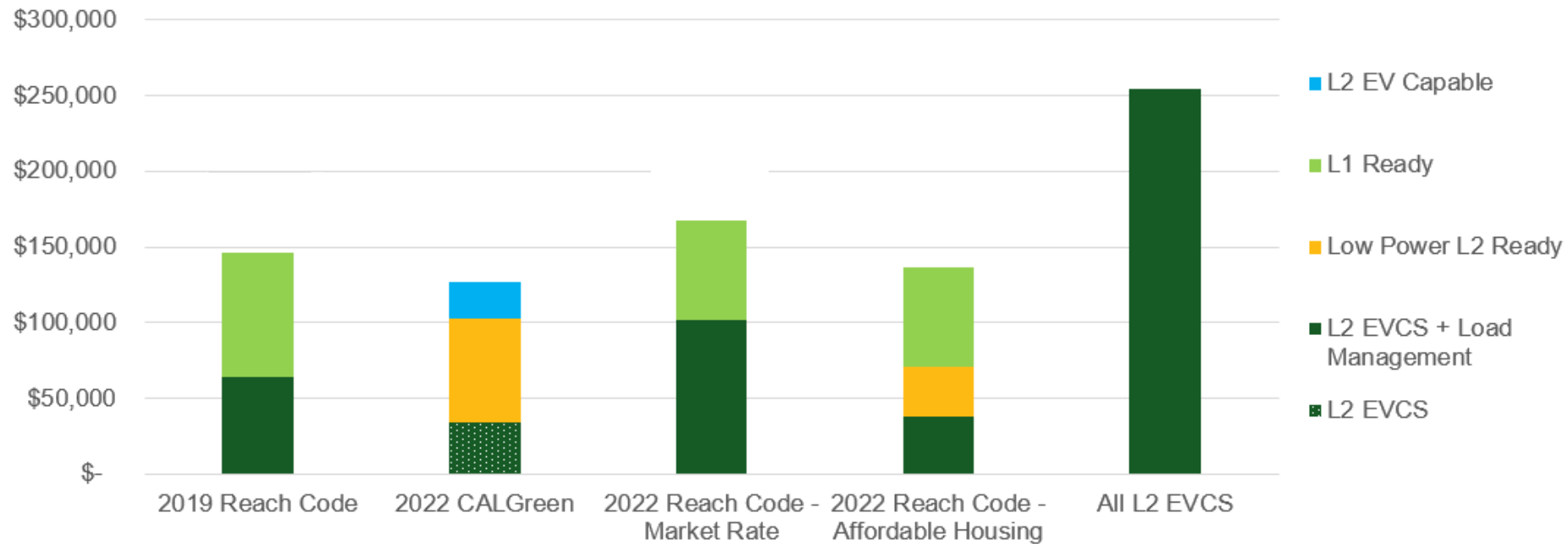
NC = New Construction

EV Charging – Cost Comparison

100% Access Cost Comparison



EV Infrastructure Cost for 100-Dwelling Multifamily Building



	2019 Reach Code	2022 CALGreen	2022 Reach Code - Market Rate	2022 Reach Code - Affordable Housing	All L2 EVCS
% of dwellings with access	100%	40-60%	100%	100%	100%
% of total construction cost	0.3%	0.3%	0.3%	0.3%	0.5%

Source: [Turner and Townsend, 2021](#), \$392/ft² for high-rise apt in San Francisco

Costs for Multi-Family Charging

Costs for a 100-unit Multi-Family Project.

	Hayward's Current Reach Code	2022 CalGreen	Model Code	Option A	Option B
L1 Ready			60		
L2 Capable	25	15			
L2 Low Power Ready		38			80
L2 High Power Ready	75			60	
L2 High Power EVSE		8	40	40	20
Total Ports	100	61	100	100	100
Total Cost		\$146,421	\$194,185	\$397,801	\$273,079
Cost/Port		\$2,400	\$1,942	\$3,978	\$2,731
% of dwellings w/access	100%	40-60%	100%	100%	100%
% of total const. cost		0.3%	0.4%	0.8%	0.6%

Public Outreach

- Email to 658 builders and developers
- Regional Workshops on February 15 and 16
- Conversations with Affordable Housing Developers
- Conversations with Business Owners and Commercial/Industrial Developers

Next Steps

May 26, 2022	Present to Planning Commission
June 21, 2022	Council Work Session to consider draft Reach Code
July 11, 2022	Present draft Ordinance to CSC
October 2022	Council considers adoption of Ordinance
November 2022	File with CA Building Standards Commission
January 2023	Reach Code takes effect

Staff Recommendation

That the Committee reviews and comments on this report and provides direction to staff.

