

EV Coordinating Council

March 20, 2024 Hybrid Meeting

Welcome!

We will begin the meeting shortly.

Zoom attendees: Feel free to change your display name to include your organization and pronouns.

This meeting will be recorded.



Meeting Agenda

Hybrid

- **Welcome (MTC)**
- **Bay Area EV Market Update (BAAQMD)**
- **E-Bikes Panel: Programs and Progress Toward Equitable Adoption**
- **Workshop: EV Equity Initiative (CLEE)**
- **Roundtable Announcements**

In-Person

- **Networking, Lunch, and Vendor Expo**
1 PM Funding Navigator Working Group Meeting (with hybrid option)





Bay Area EV Market Update

Caylee Mercado
Grants Specialist
cmercado@baaqmd.gov

BAY AREA

ELECTRIC VEHICLE TRENDS AND GOALS



13,454 public charging ports currently

58,000 public charging ports needed by 2030 (NREL)

In 2022, 6.2% of the Bay Area fleet were EVs, with a goal of 90% by 2050

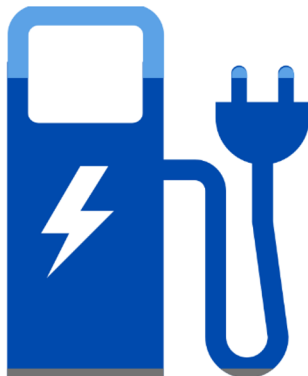
In 2023 Q4, 24.7% of all new sales in CA were EVs 

Public charging ports

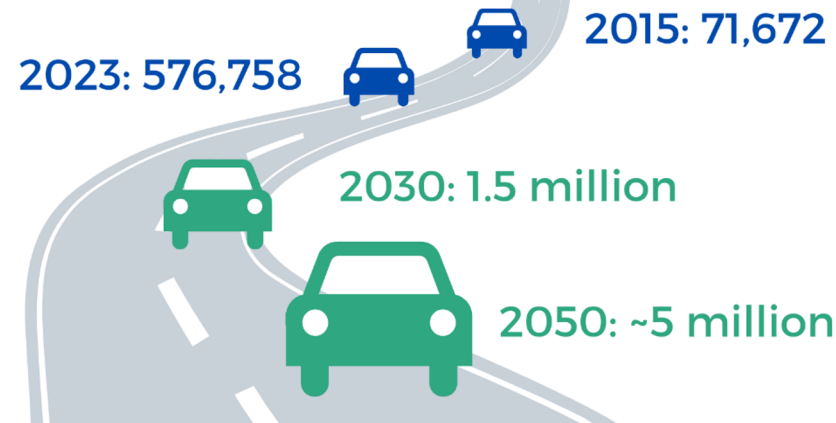
19% DC Fast

81% Level 2

<1% Level 1



Progress towards our EV Adoption Goals

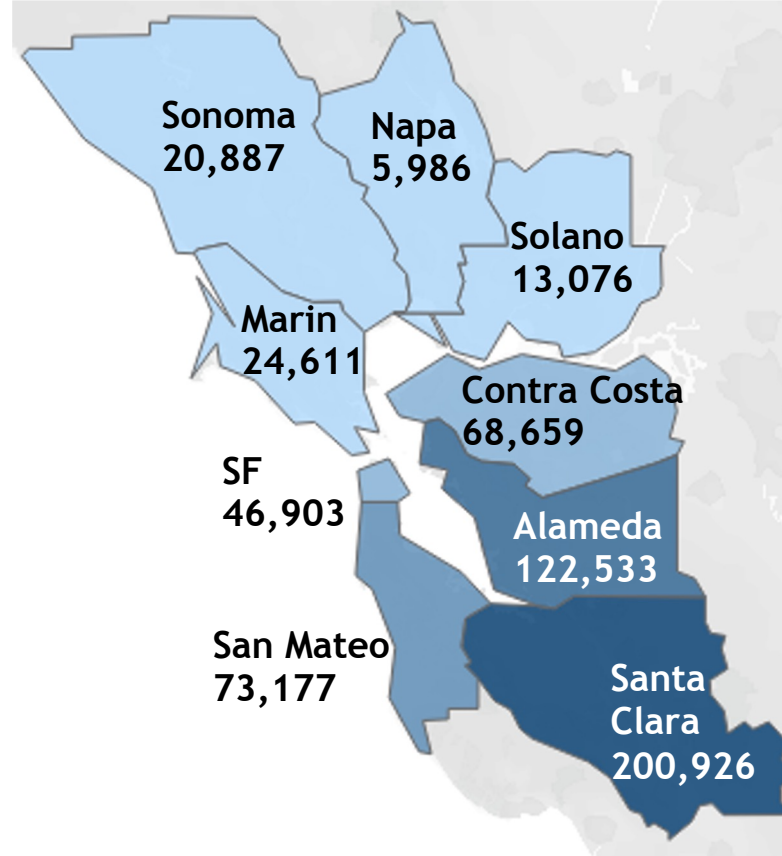


ZEV Adoption in the Bay Area



CA Total: 1,846,874

Total New ZEV Sales in California

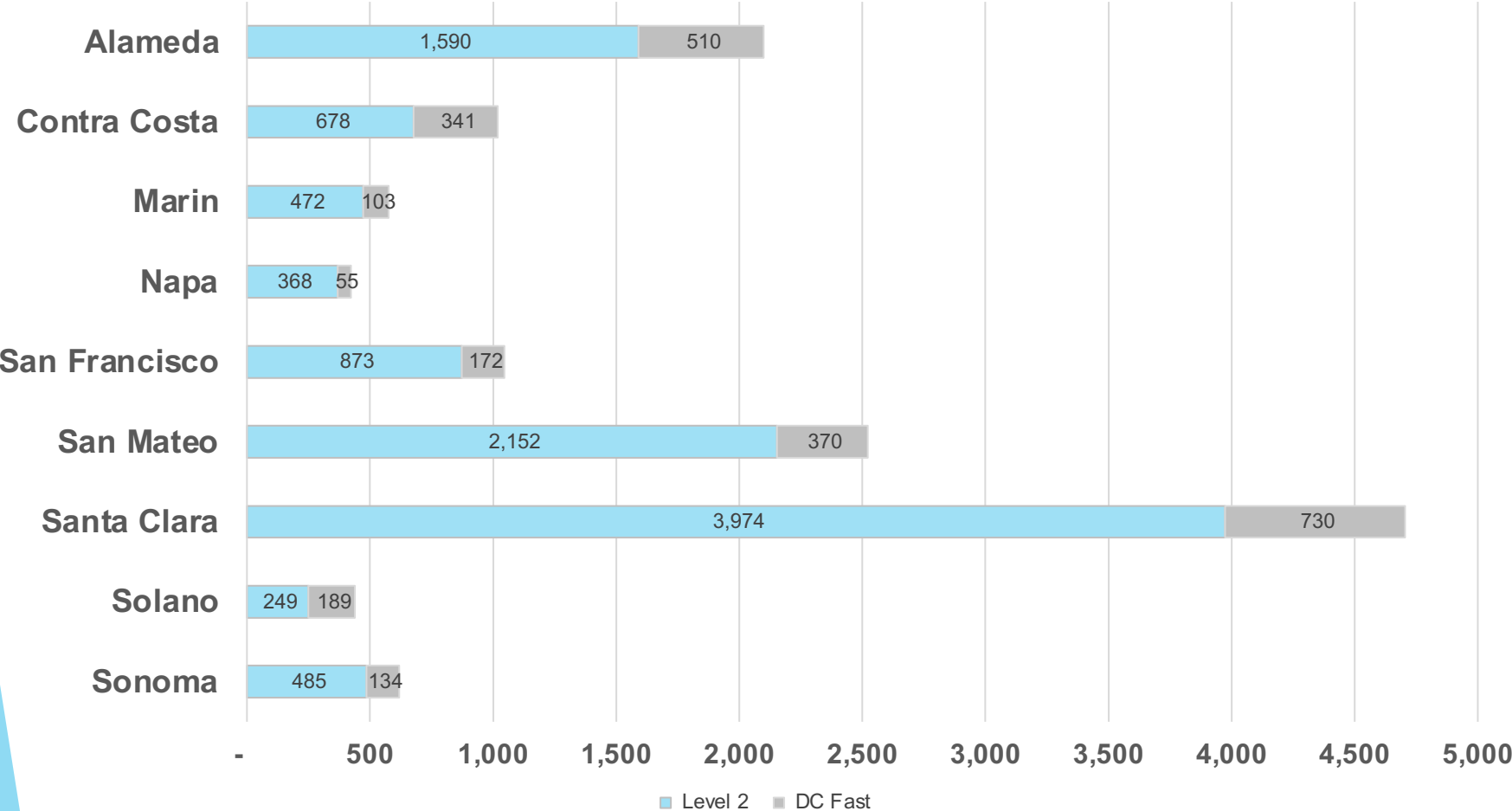


Bay Area Total: 576,758

Total New ZEV Sales in Bay Area

Existing Bay Area EV Infrastructure

ELECTRIC VEHICLE CHARGING PORTS BY COUNTY



Total public EV charging ports as of December 2023: ~13,450

California Energy Commission (2023). Electric Vehicle Chargers in California. Data last updated March 1, 2024. Retrieved March 14, 2024 from <https://www.energy.ca.gov/zevstats>

CA Medium/Heavy Duty EVs - 2022



272

**CA Medium/Heavy-Duty
EV Trucks**



1,708

CA EV Buses



340

**CA EV
Delivery Vans**

Image source: Veloz California Electric Vehicle Market Report. <https://www.veloz.org/ev-market-report/>
Data Source: California Energy Commission (2023). Medium- and Heavy-Duty Zero-Emission Vehicles in California. Data last updated June 5, 2023. Retrieved March 15, 2024
from <https://www.energy.ca.gov/zevstats>



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT



CLEAN CARS
FOR ALL



Clean Cars for All Program Update

Caylee Mercado
Grants Specialist
cmercado@baaqmd.gov



Program Overview



Grants for income-qualified residents who retire their older car



Vehicles and Infrastructure

- Purchase or lease, new or used
- Hybrid, plug-in hybrid, battery electric, and fuel cell electric vehicles
- Home charger installation or portable charger for plug-in hybrid and battery electric vehicles




Mobility Options

- Pre-paid debit card for:
 - Electric bicycles
 - Public transit (Clipper Card)

2024 Program Changes

 **Location** • Expanded eligibility to all Bay Area ZIP codes

 **Vehicle** • Increased retired vehicle model year

 **Income** • Focus on the lowest income residents

Higher grant amounts and up to \$2,000 more for residents living in disadvantaged community (DAC) census tracts

	Previous Program	New Program
ZIP Codes	76 disadvantaged ZIP Codes	All Bay Area ZIP Codes
Federal Poverty Level	≤400%	≤300%
Retired Vehicle Model Year	2005 or older	2007 or older
Grant Amount	\$5,000 - \$9,500	\$7,000 - \$12,000

Panel on E-bikes: Programs and Progress Toward Equitable Adoption

Clarrissa Cabansagan, Silicon Valley Bicycle Coalition

Brett Thurber, The New Wheel

**Hannah Otto, Waterside Workshops & Berkeley E-Bike
Equity Project (BEEP)**

Wendy Chou, Acterra (Moderator)

A Q&A session will follow. Please hold questions until the end of the panel presentations. A PDF of the slides will be available.



Meet our Panelists



Clarrissa Cabansagan

(she/her) is the Executive Director of the Silicon Valley Bicycle Coalition (SVBC) whose mission is to build healthier, more just communities by making bicycling safe and accessible for everyone in San Mateo and Santa Clara Counties.

Meet our Panelists



Brett Thurber is the founder of The New Wheel, an electric bike retailer with over 10,000 riders in the Bay Area. In 2023 he co-founded Friiway, an ebike subscription service designed to lower the barrier to using high quality e-bikes. His life's mission is to help people move into bicycles and sustainable, human-scale transportation.

Meet our Panelists



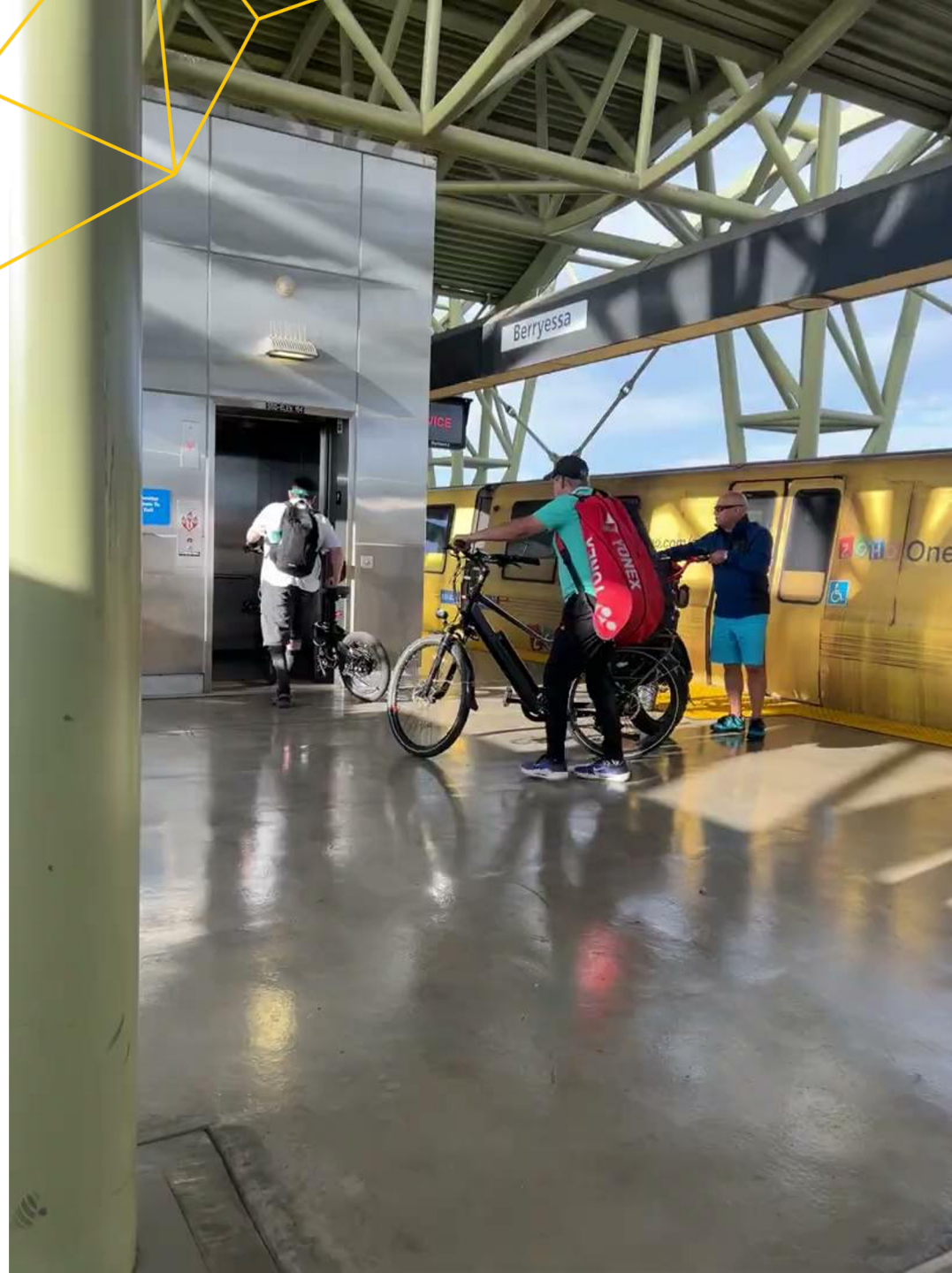
Hannah Otto is the Waterside Workshops program manager for the pilot Berkeley E-bike Equity Project (BEEP) funded by the City of Berkeley's Climate Equity Fund. BEEP is a unique e-bike incentive program which provides low-to-moderate income Berkeley residents the use of an e-bike for a full year, supported by safety trainings and regular maintenance check-ups.



Why E-bikes?

EV Coordinating Council
March 20, 2022

Clarrissa Cabansagan, Executive Director
Silicon Valley Bicycle Coalition



OUR MISSION

To build more **just** and **healthy** communities by making bicycling **safe & accessible** for everyone.



Our Reach

● 9 local teams

- North San Mateo County
- San Mateo
- San Carlos & Belmont
- Redwood City
- Palo Alto
- Mountain View
- Sunnyvale
- Santa Clara
- San Jose

● 4 advocacy partners

- Coastside on Bikes
- Walk Bike Burlingame
- Walk Bike Cupertino
- San Carlos Bikes

2 Counties
 35 Cities & Towns



SKY7

Concern

TONIGHT
11PM

TEEN BICYCLIST KILLED IN CRASH WITH TRUCK

ABC7 NEWS



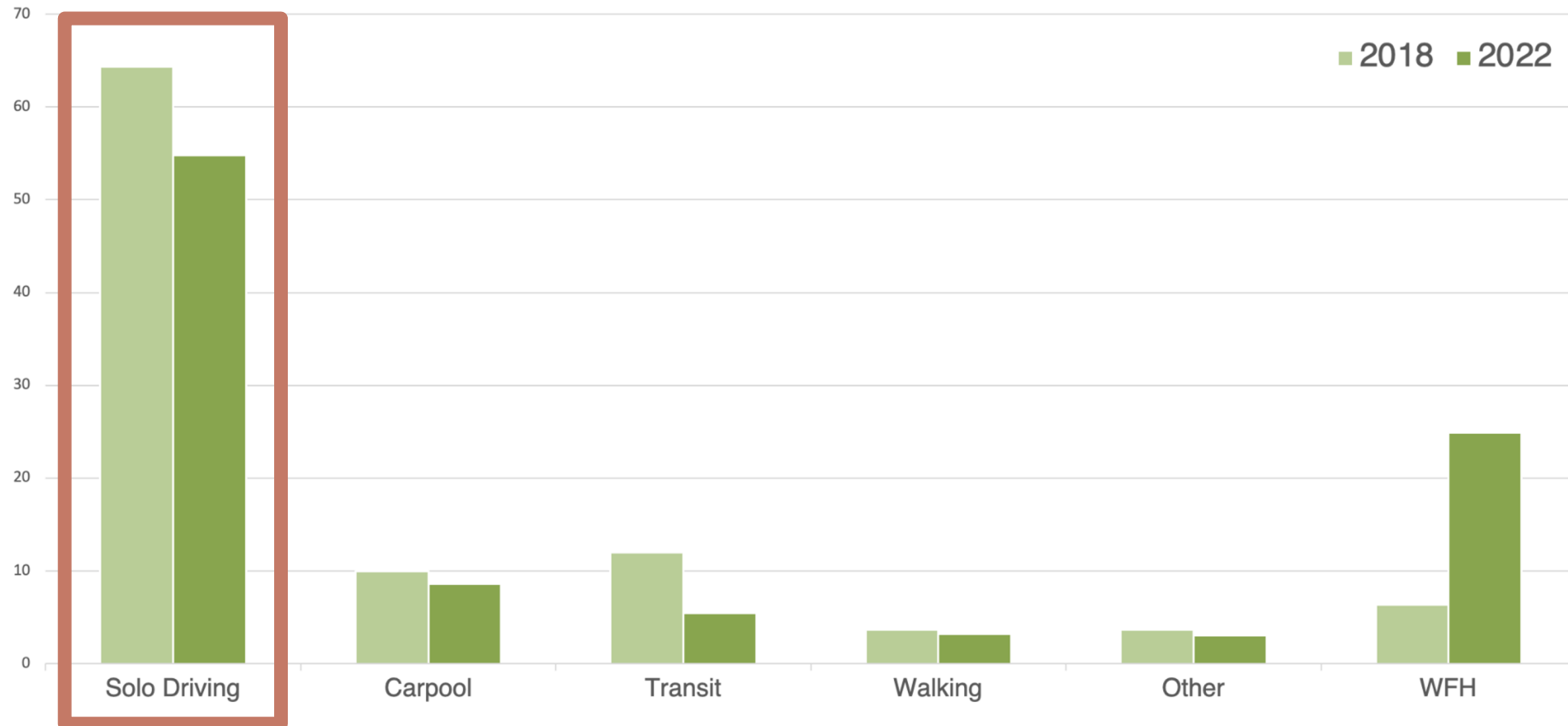


Culture



Convenience

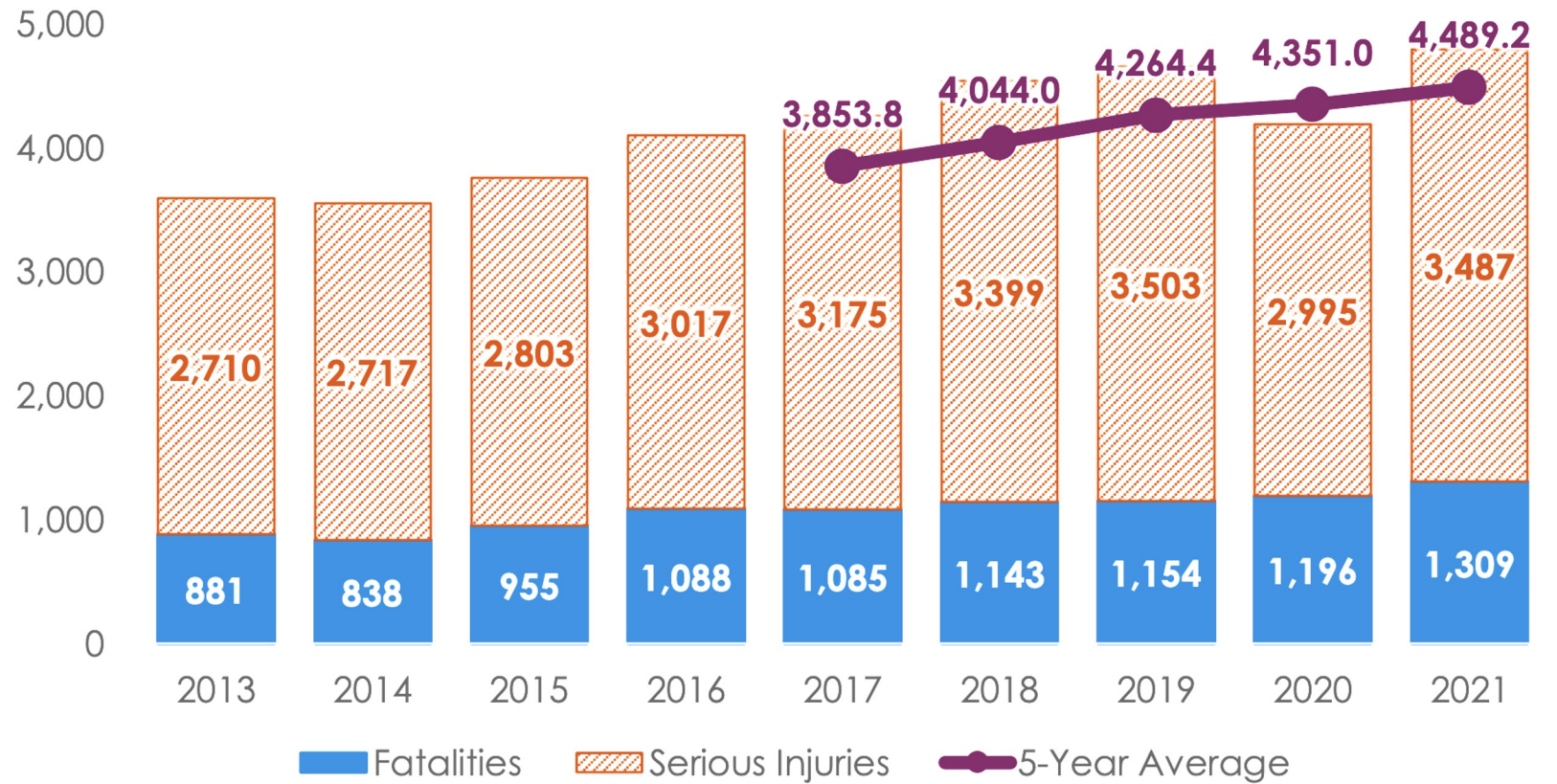
Bay Area Commute Mode Choice 2018 vs. 2022





Bicyclist + pedestrian fatalities are at an ALL-TIME HIGH.

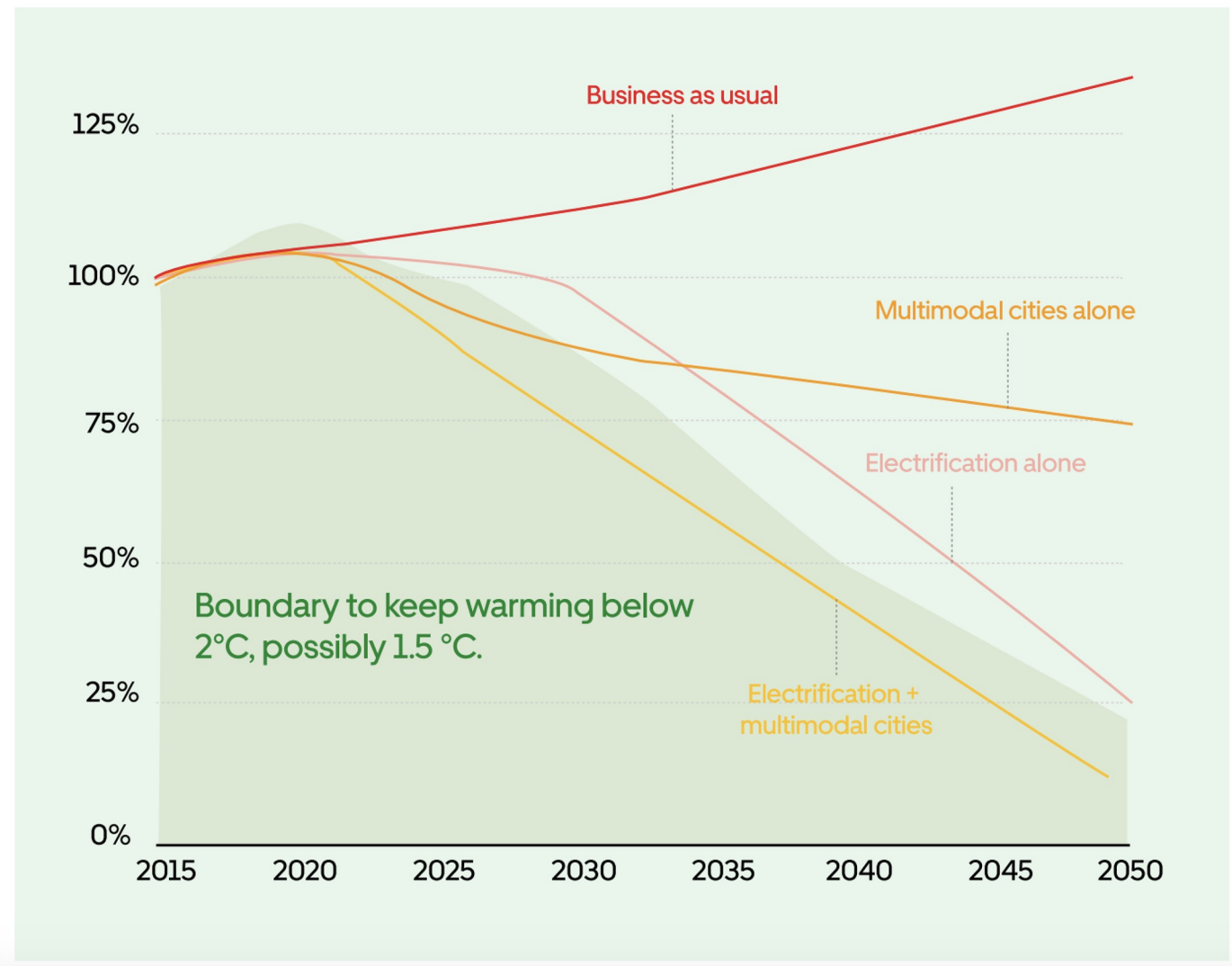
Tracks with cell-phone adoption.



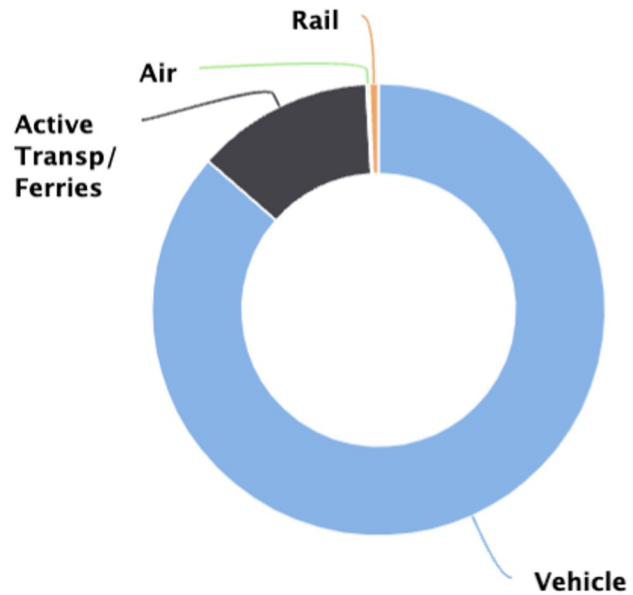
Annual emissions scenarios relative to 2015

Vehicle electrification is ONLY ONE PART of the solution.

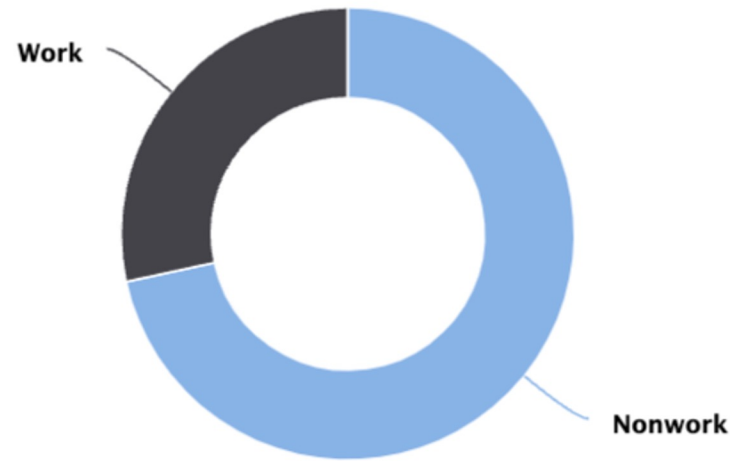
Also need to reduce overall private car dependence and promote walking, cycling and public transit.



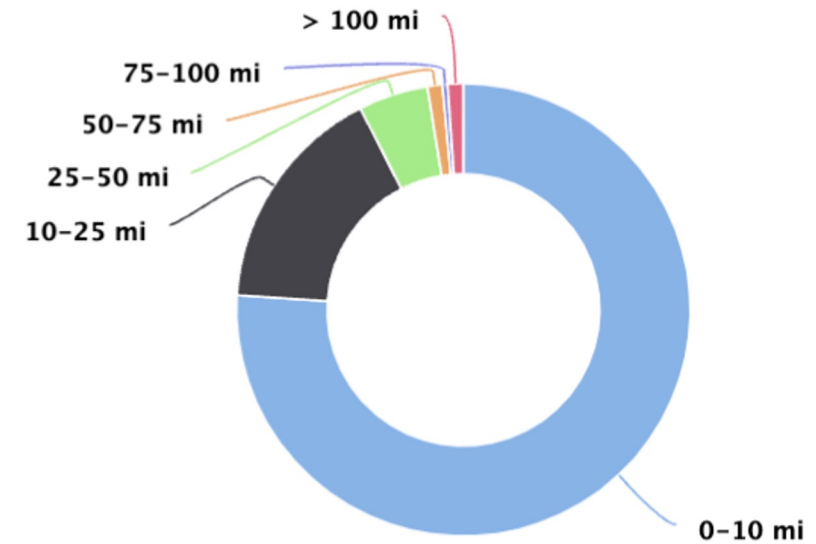
Most trips are...



made by car



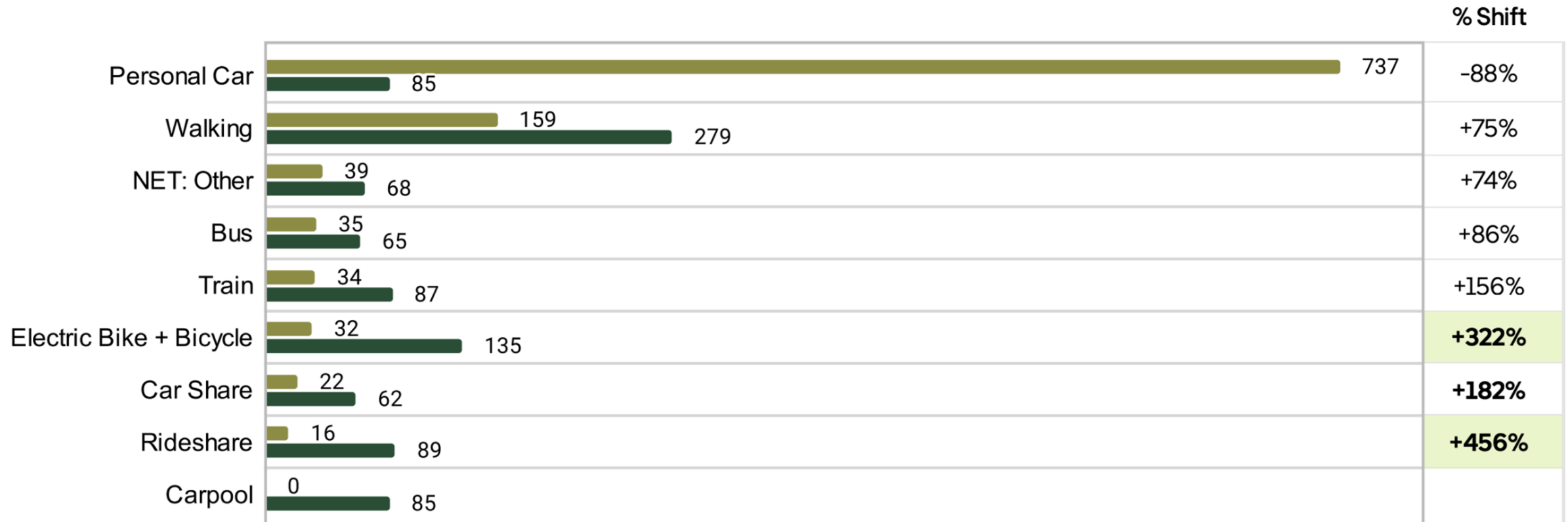
non-work trips



under 10 miles

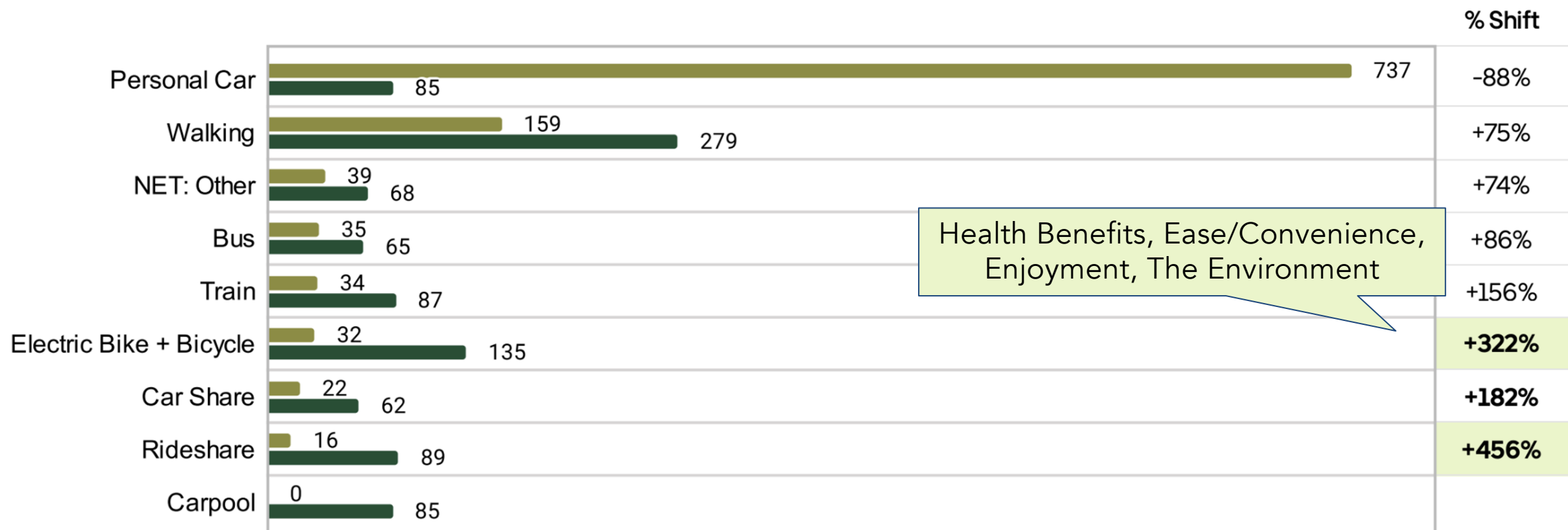
One less car...

Car Owners, Total Trips by Mode | Week 1 v. Rest of Trial Avg.



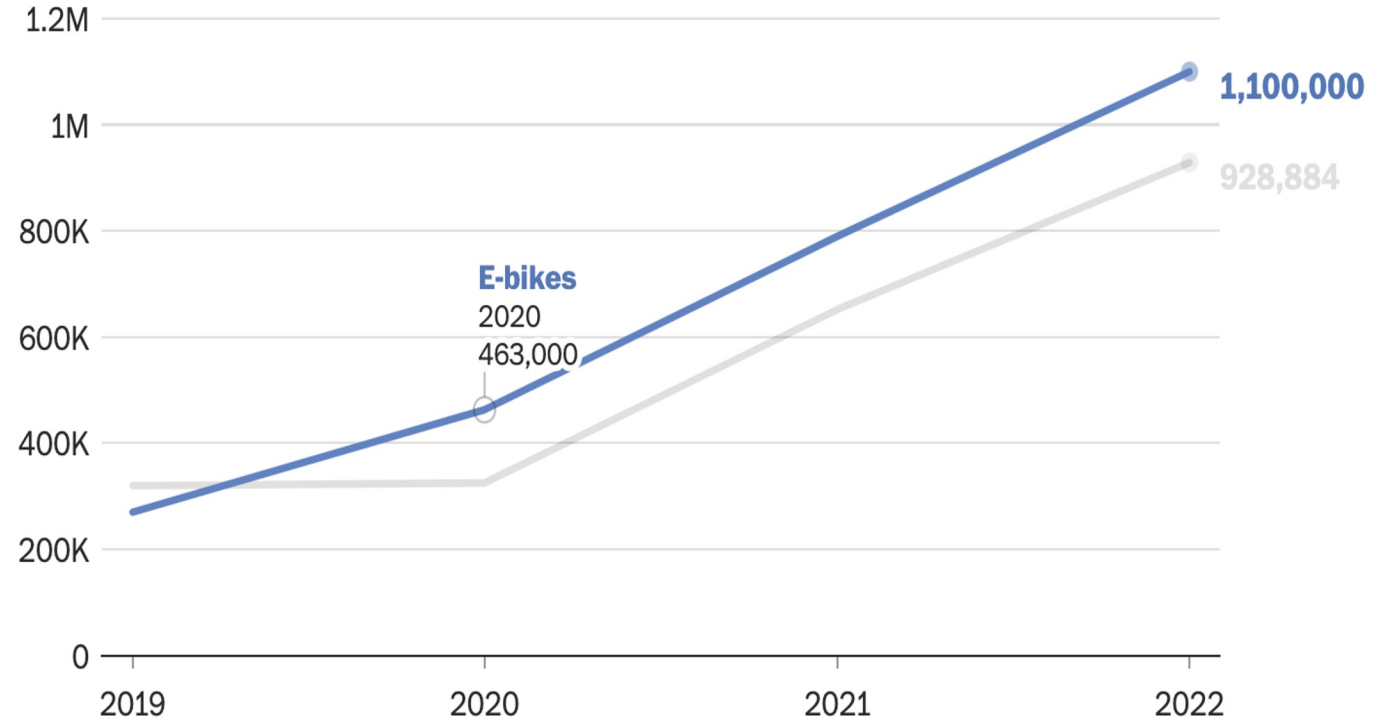
One less car...

Car Owners, Total Trips by Mode | Week 1 v. Rest of Trial Avg.



E-Bike Sales in the U.S. Overtook EVs in 2019

**E-bike sales
 far outpace
 EV
 adoption**

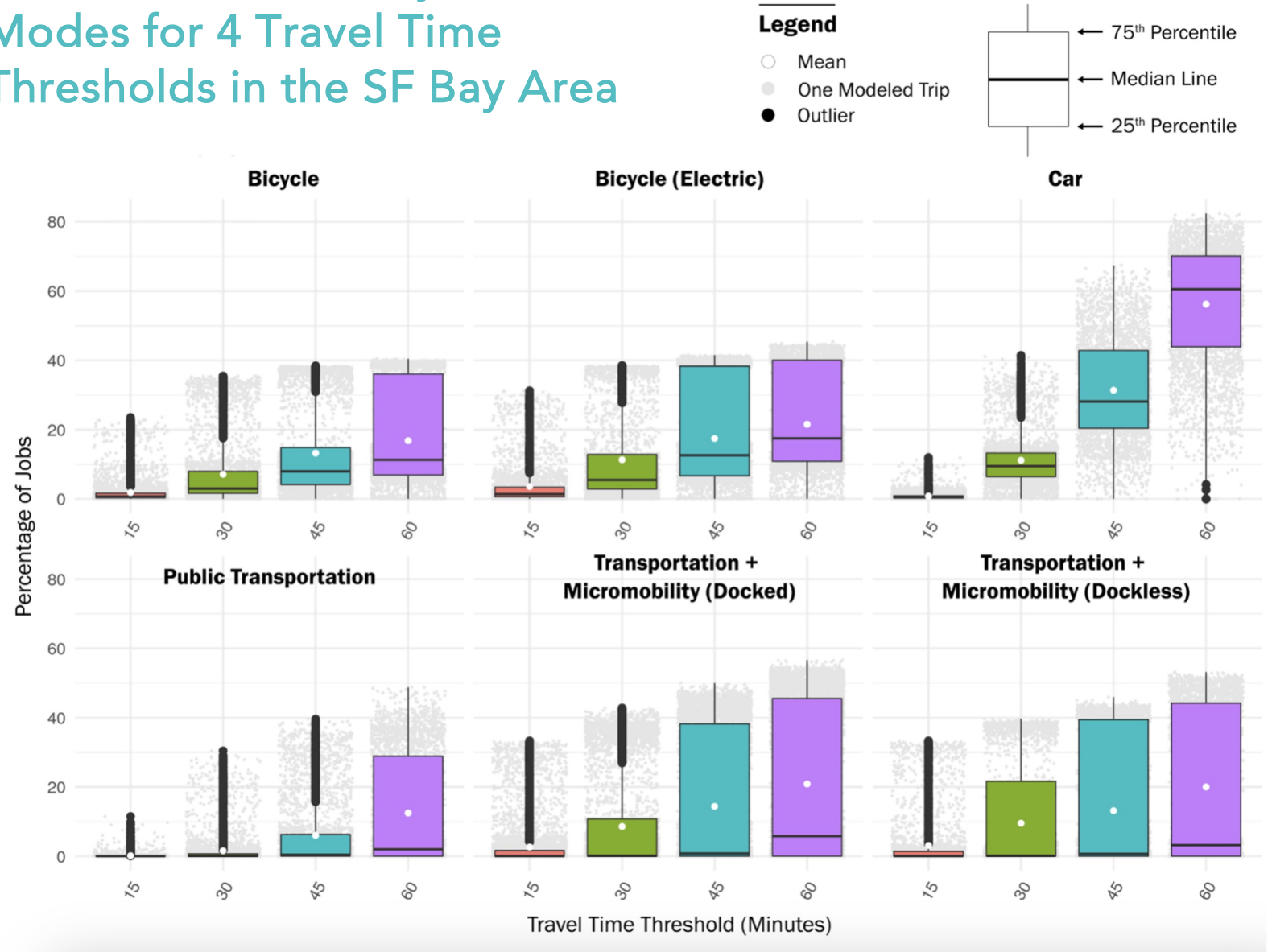


EVs includes plug-in hybrids. E-bike import figures are used as proxy for sales given reliance on imports by

Improved access to jobs

Transit + electric micromobility competitive with car

% Jobs Accessible by Various Modes for 4 Travel Time Thresholds in the SF Bay Area



•All Possible Commutes: How Micromobility and Realistic Car Travel Times Impact Accessibility Analyses. NUMO, 2023.





El Camino Real – The Grand Boulevard

- **41 mile** corridor cutting San Francisco to San Jose
- Passes through **19 jurisdictions** – mostly downtowns
- **State highway**, owned and operated by Caltrans
- Economic opportunity - Existing destination of shops, services, jobs, schools and residences

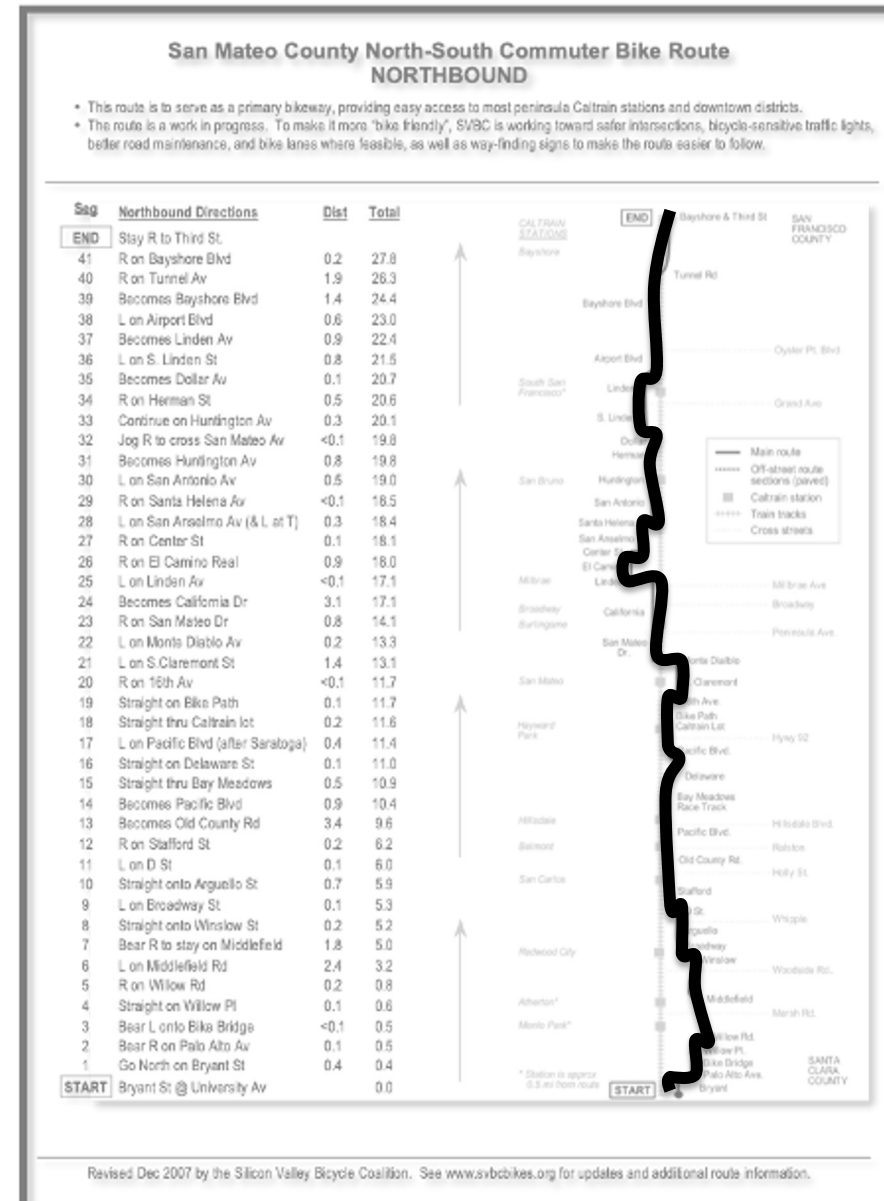
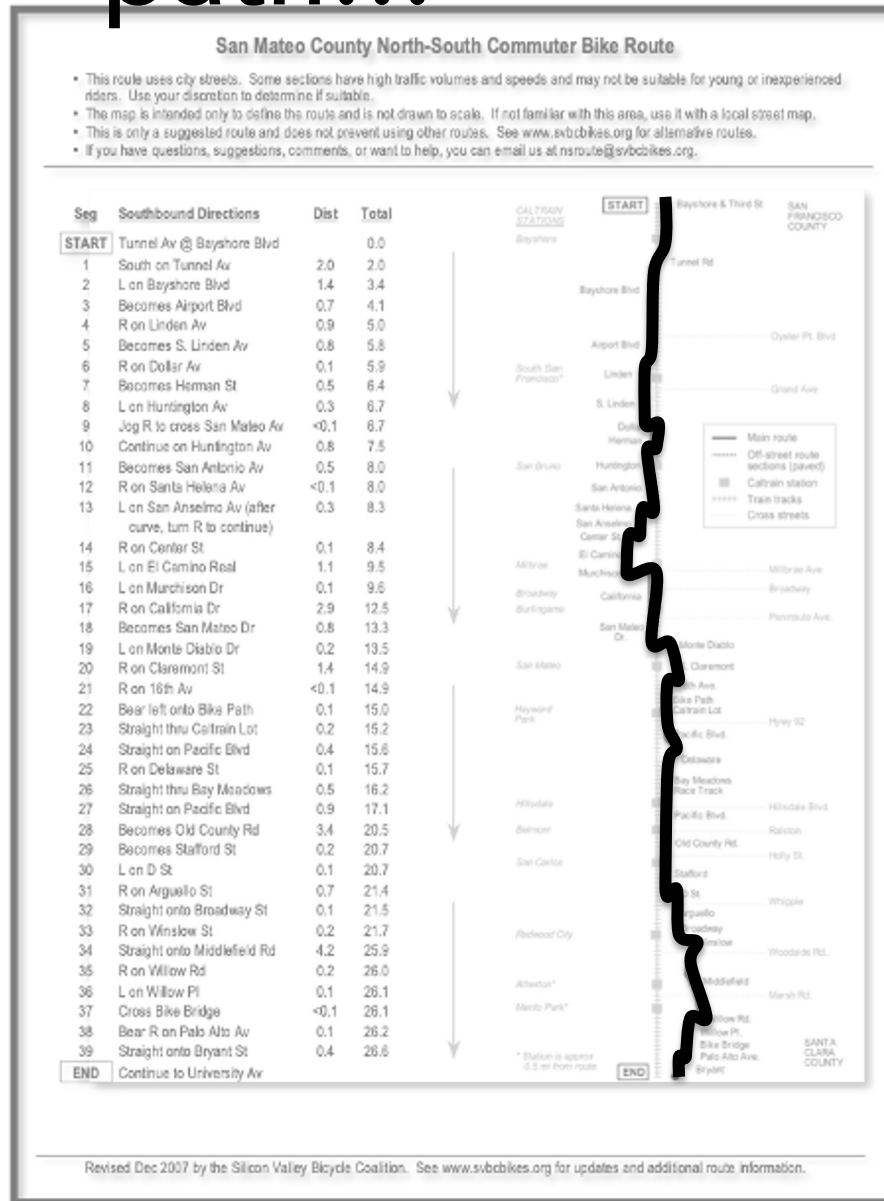


El Camino Real Vision 2030



El Camino Real thrives as a vibrant, inclusive corridor that fosters a dynamic community where people can seamlessly live, work, shop, play and connect, prioritizing efficient transit and active transportation to enhance the overall well-being and quality of life for all.

This is the current bike path...



Why ECR for bikes?

Why now?

- ONLY N-S *non-freeway* route accessible for people walking and biking
- **3663 crashes and 54 killed in 10 years**
- Crash data shows significant use by bicyclists and pedestrians
- Access to transit
- ~50% will get repaved in the next 5-years

El Camino Real Bikeways

Proposed Bikeways projected to be installed as part of Caltrans SHOPP projects, with construction start anticipated between 2024- 2028 on SR-82



What it looks like today...



What we want to see...



Separated bike paths
Protected intersections
PEOPLE-CENTERED STREETS



SILICON VALLEY
BICYCLE
COALITION



Clarrissa Cabansagan, Executive Director

clarrissa@bikesiliconvalley.org

www.bikesiliconvalley.org



Sustainable Growth Model For Ebikes



About us



The New Wheel

est. 2010



San Francisco

est. 2011



Larkspur Landing

est. 2016



Oakland

est. 2022



What we do

An experiential retailer here to inspire & support people to ride ebikes.

Quality
Product



Comprehensive
Ebike Services



Long-Term
Customer Success



friivoway

Electric Bike Subscriptions



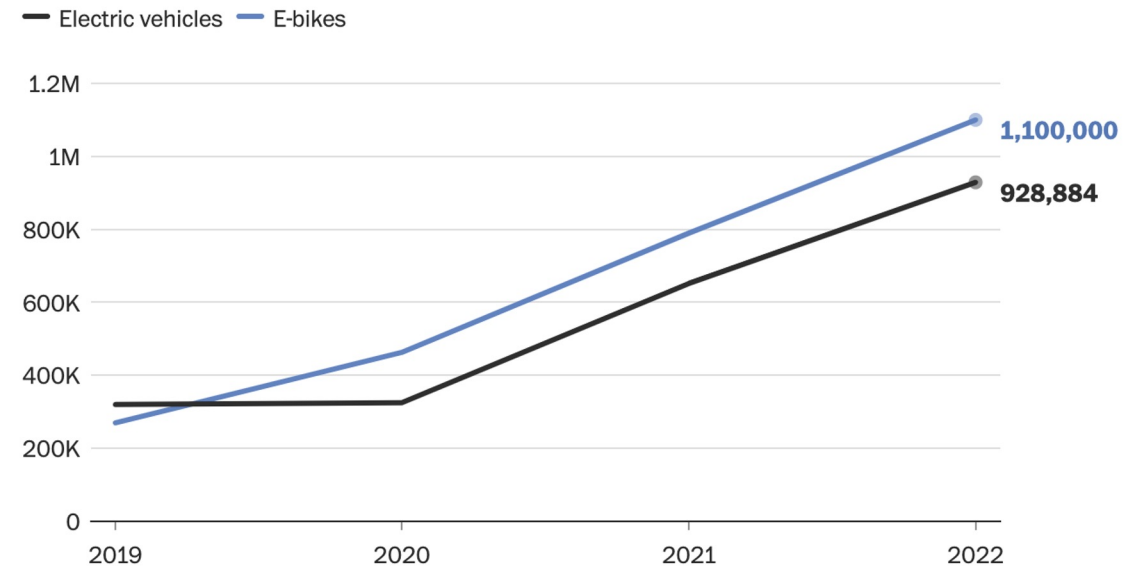
Trends in the USA

- USA had a huge bike boom during Covid
- That boom has ended
- Recreational cycling is still paramount
 - Cycling for transportation is still the exception
- Cycling infrastructure in the USA (networks, parking, amenities) is severely lacking
- Many bikes that were sold were sub-par quality and sold consumer direct

People Get the Value

- Ebikes are incredible
- What other vehicle combines fitness, efficiency, utility and joy?
- Without any incentives, e-bike sales have overtaken electric vehicles

E-bike sales in the U.S. overtook electric vehicles in 2019



EVs includes plug-in hybrids. E-bike import figures are used as proxy for sales given reliance on imports by retailers.

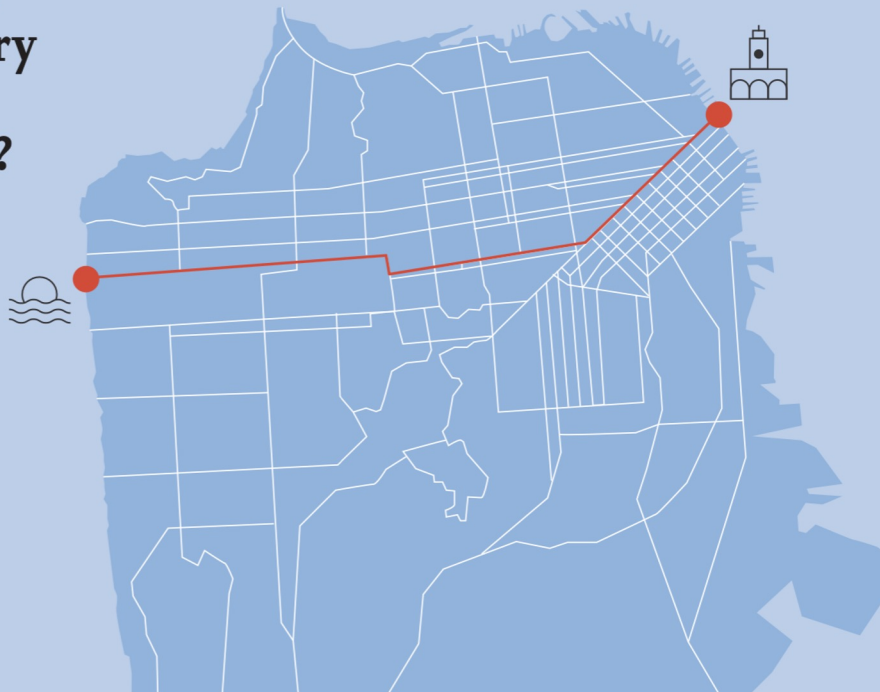
Source: [BloombergNEF](#), [Light Electric Vehicle Association](#), [Argonne National Laboratory](#)

MICHAEL J. COREN / THE WASHINGTON POST







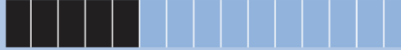





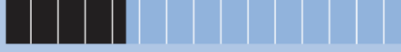


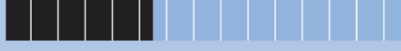

Cyclists are (really) good

How long does it take to get from the Ferry Building to Ocean Beach?



FUN FACT:

Did you know that you can ride your electric bike over 120 miles for the same amount of energy as taking a 10 minute hot shower? Or in other words the equivalent of driving around 4 miles in a Tesla!

	TIME	COST	CO2
 WALK	 2.25 HRS	\$0	 2 ¹ / ₂ LBS
 BICYCLE	 50 MIN	\$0	 1 ¹ / ₃ LBS
 EBIKE	 30 MIN	\$0	 0 ³ / ₄ LBS
 CAR SHARE	 45 MIN	\$27	 13 ¹ / ₂ LBS
 BUS	 55 MIN	\$2.75	 0 ¹ / ₂ LBS

First Class Cycling

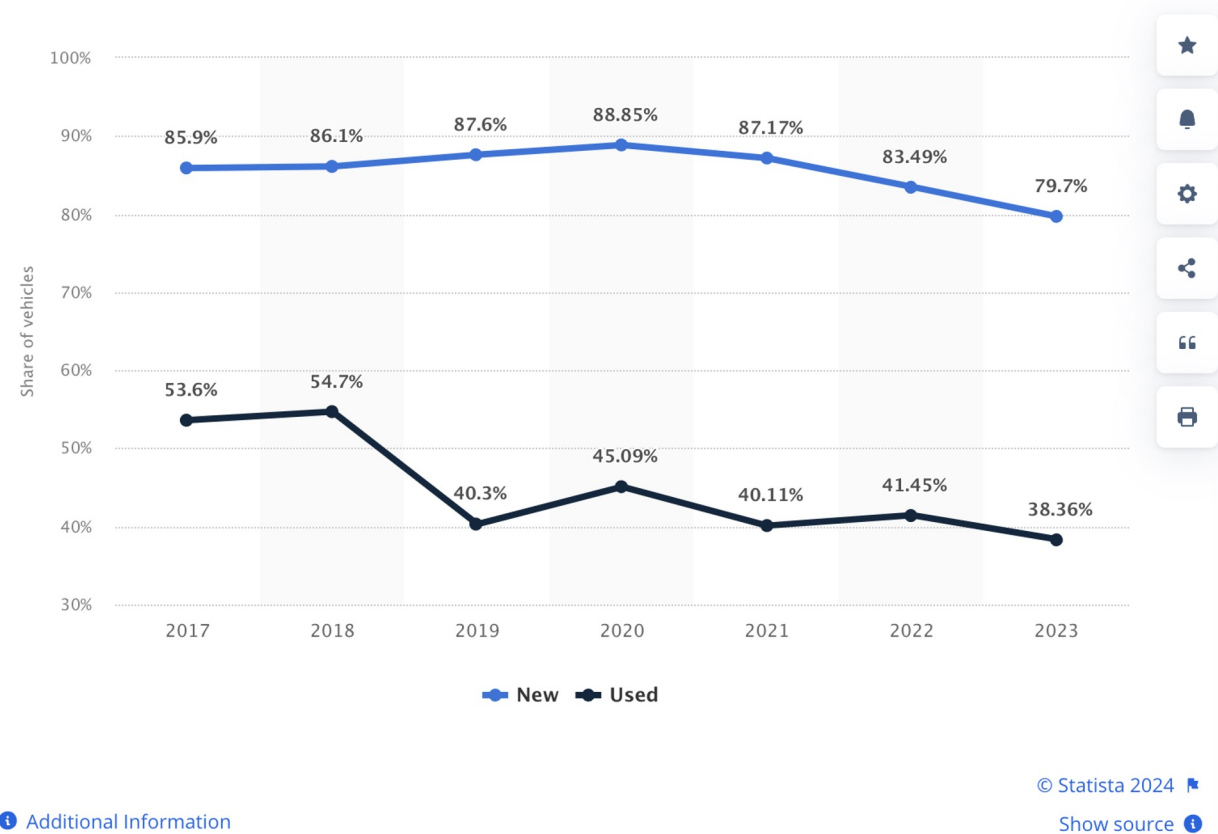
- Are cyclists in the Bay Area treated first class?
- How are they treated?
- How does that impact our common understanding of the value of the bicycle?



First Class Bicycle Parking in the Netherlands

Budget is an Issue

- Price is not the issue, value and budget is.
- 79% of all car purchases were financed
- Once a car is purchased and insurance paid, it makes more sense to use it versus add another vehicle or transit



What's Working



1. **Value: Make Cycling First Class**
2. **Budget: Ebike Leasing**
3. **Growth: Bringing more investment into cycling by increasing price and localizing service. A virtuous circle.**

Example: Adding Value in Europe

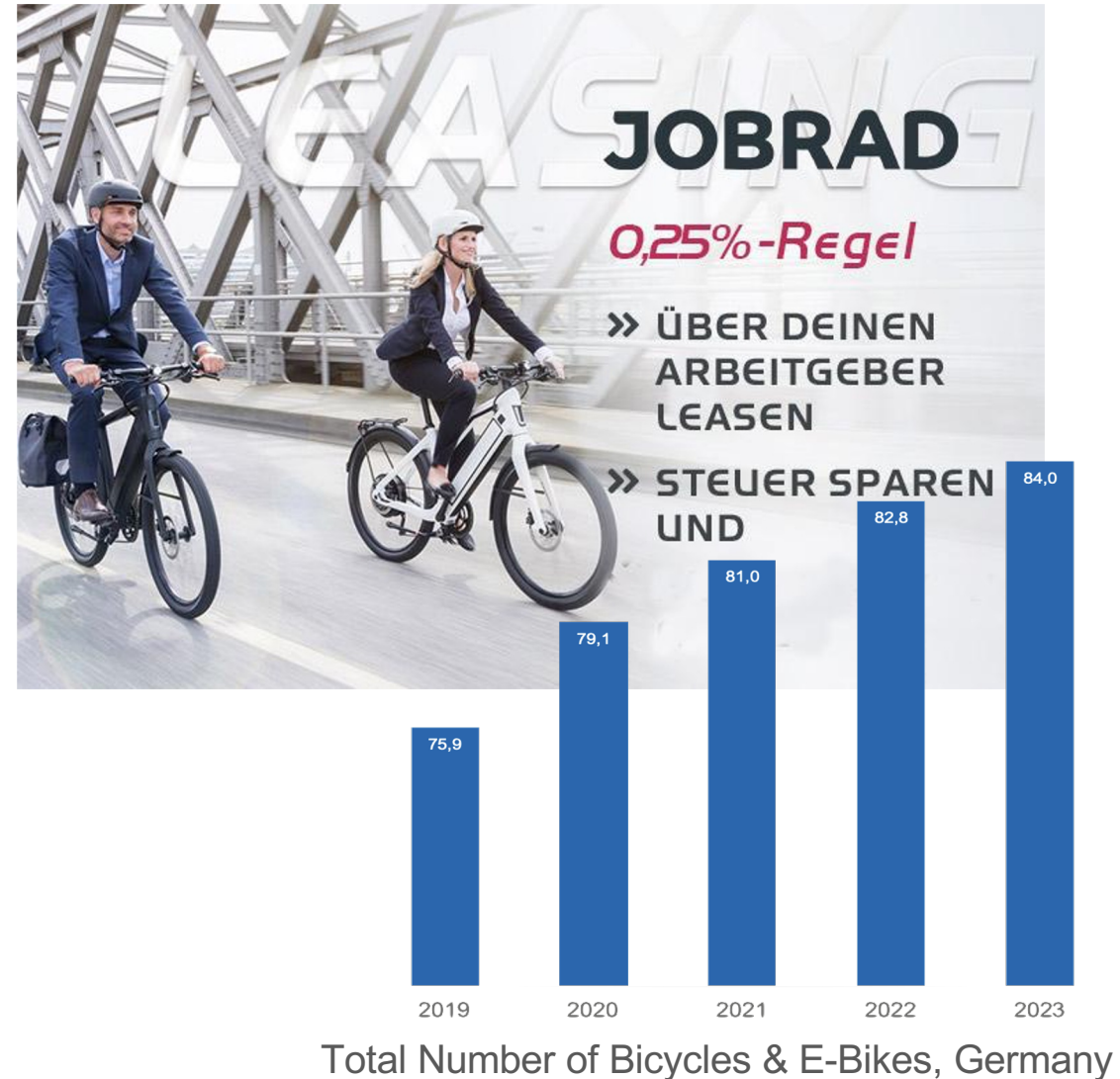
- Electric bikes are understood as the future of cities
- Paris example: Mayor Hidalgo has spearheaded a transformation since Covid
- Not just bike lanes: Car-free superblocs, bicycle parking and bike share



A Superblock in Barcelona, Spain

Example: Budget & Growth with Leasing

- In Europe, Employees can use pre-tax dollars to lease a bike over 36 months
- An \$8000 = \$125/month with tax savings taken into account
- Leased bikes sold locally and include service.
- 1 in 4 bikes in Germany now leased



Conclusion

- **Cycling is unique:** As more people cycle, it is better for each individual, everyone else who cycles, and the environment.
 - This cannot be said for cars
- Europe has a growth model for cycling motivated by making cities better for people.
- Policy must stay laser focused on **increasing the value of bicycles for all people.**
- Multiply the impact of subsidies and make a deep impact on affordability by **catalyzing leasing.**

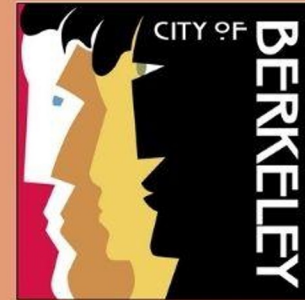
Berkeley E-bike Equity Project

presented by
Hannah Otto, Program Manager
Waterside Workshops



Background

- Berkeley Climate Equity Fund (CEF)
 - Provides climate and resilience benefits to low-income Berkeley residents through pilot programs that support building and transportation electrification
- Waterside Workshops' CEF proposal
 - Expands mobility for income-qualified households through an e-bike access program
 - supports e-bike youth education and workforce program
 - 2-year, \$250,000 contract



Timeline

August 2022 - January 2023

Design & Engagement

February 2023 - May 2023

Enrollment & Onboarding

May 2023 - June 2024

Implementation & Data Collection

July 2024 - September 2024

Analysis & Final Report

Youth Programs



Bike Shop



Boat Shop





Target Population

ADULT ACCESS

- 600 applications within three weeks
- Income qualified
- City of Berkeley residents
- 70% participate in a different income qualified program
- 75% self identify as a person of color

YOUTH EDUCATION

- 20+ bike shop interns
- Staff certifications
- Developed relevant e-bike curriculum
- Participate in BEEP fleet assembly & maintenance
- 40% live below the poverty line
- 90% self identify as a person of color

Education



Fleet Assembly & Maintenance



Group Workshops





Procurement

SUMMARY

- Avention & RadPower models
- Best value for budget constraints
- Accommodated accessory requests
- Provided safety equipment

TAKE AWAYS

- Easy dealership enrollment
- Supply chain issues never materialize
- Place orders non-concurrent with industry peaks

Participant Experience

Application	Onboarding	E-bike Ownership
Complete interest form	Participant agreement, deposit/volunteering	Monthly odometers & quarterly surveys
Lottery winners invited to apply	E-bike and product package customization	Ongoing support & Community Building activities
Submitted verification	Safety Workshops	Participant receives full ownership

Participants



"I feel like I am more part of Berkeley and have discovered bike paths and parks"

-Julio



I have "more access to areas where parking was a problem."

-Hattie

Participants



"Getting [our] kids to school is more fun"

-Cody/Ben



I "have used car five times in the last six months. Goal is to do without altogether"

-Emerald



Since Deployment

SUMMARY

- Four bikes stolen
- One crash and totaled bike
- Two participants moved away
- One removed themselves
- 5 participants volunteered in lieu of providing a deposit

TAKE AWAYS

- The appetite for e-bikes is apparent
- Varying participant needs based on their riding experience
- Multiple touches to increase response rate (~58-80%)

Community Building



Community Building



Results to Date



**OVER 16,000
MILES RIDDEN**

“IT HAS BEEN AMAZING HAVING AN E-BIKE. MY MOBILITY AND ACCESS TO DIFFERENT PLACES HAS IMPROVED ENORMOUSLY”

**SHOPPING & WORK ARE MOST
COMMON DESTINATIONS**

“IT'S BOOSTED MY PARTICIPATION IN COMMUNITY. BROUGHT MORE OF MY PATRONAGE TO MORE LOCAL BUSINESS”

“I CAN'T BELIEVE HOW LIFE-CHANGING IT IS TO NOT HAVE TO RELY ON ANYONE BUT MYSELF TO GET WHERE I WANT TO GO”

Evaluation

- Ongoing through July 2024
- Final Report anticipated September 2024
- Topics of interest
 - Community, health, and financial impacts
 - User safety, comfort, and education
 - Capacity building achievements
 - Vehicle usage and ownership metrics

THANK YOU

E-mail hannah@watersideworkshops.org
Web bit.ly/BEEP

EV Equity Initiative - Workshop



Ted Lamm is Senior Research Fellow in the Climate Program at the Center for Law, Energy & the Environment (CLEE). His work focuses on the development of state and local climate policies, transportation and building electrification, and climate-related risks. He currently leads CLEE's EV Equity Initiative.



EV Equity Initiative Action Plan Framework & Mapping Platform

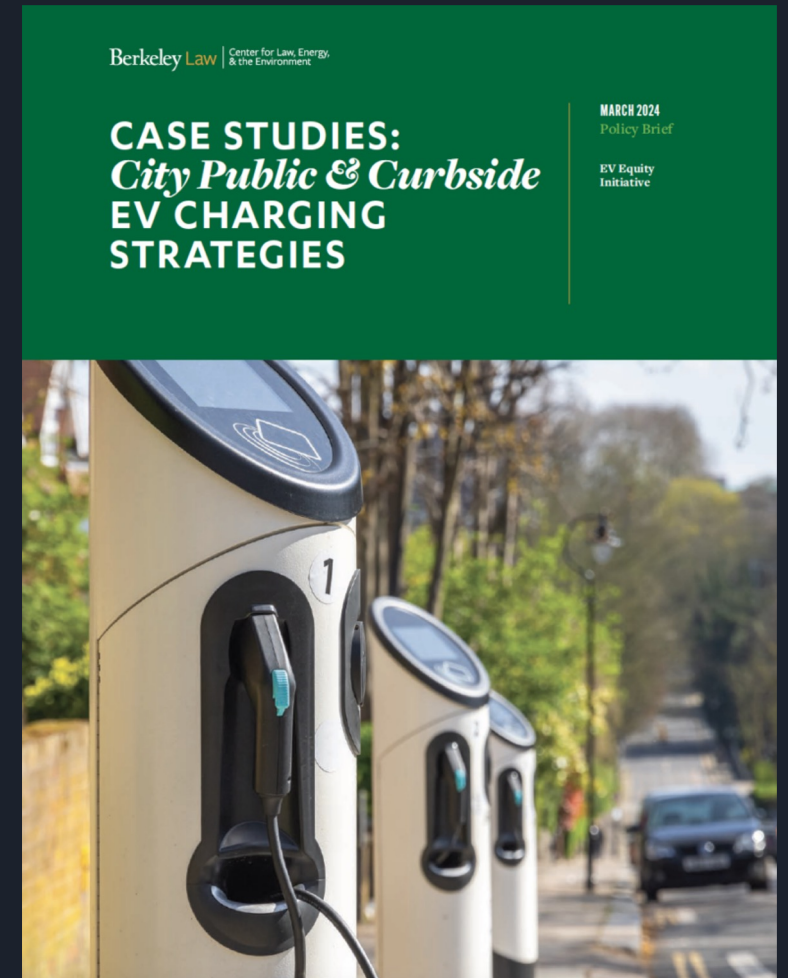
Berkeley Law

Center for Law, Energy,
& the Environment

CLEE EV Equity Initiative

We seek to build locally tailored, community driven, and replicable approaches to the development of electric vehicle and mobility infrastructure in underserved communities in California and the US.

- Policy support and research
- Mapping and site selection
- Financing and revenue strategies
- Resources for stakeholders and policymakers



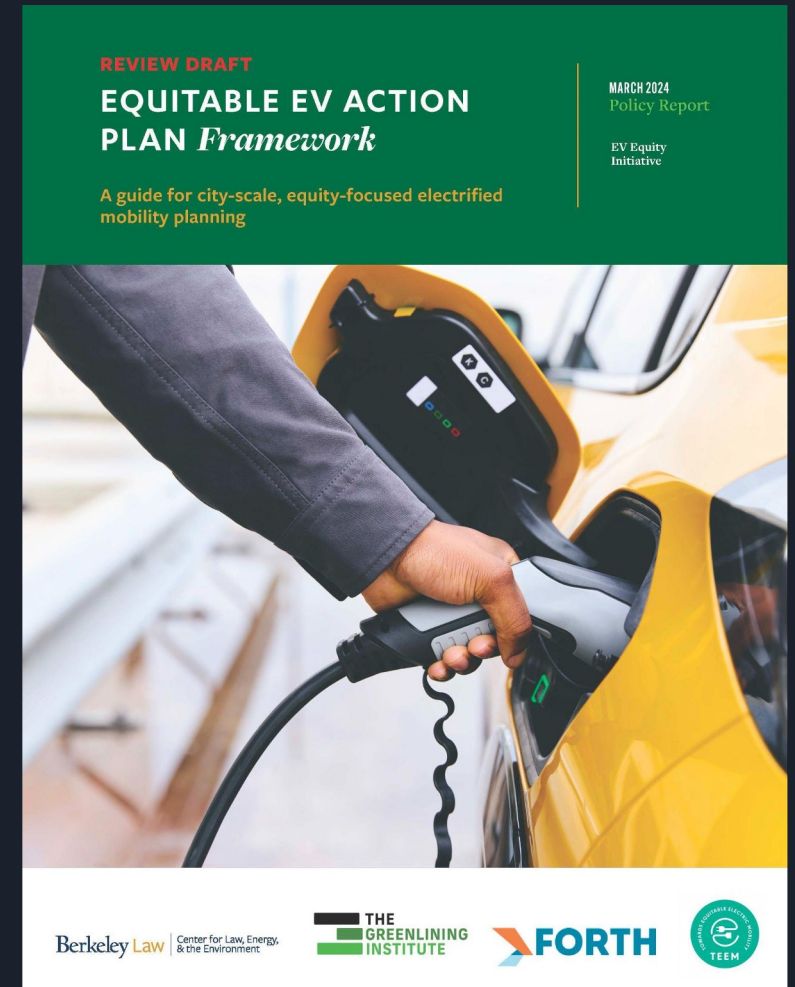


CLEE EV Equity Initiative: Why Local Governments?

- First-of-its-kind state-driven technology transition
 - Risk of reducing, not enhancing, mobility
 - State/federal lead:
 - Targets + technology
 - Incentives
 - Local lead:
 - Planning
 - Permitting
 - Procurement
 - Community engagement
 - Economic development
 - Public transportation linkage
- Availability/affordability of vehicles
- Equity in access, mobility promotion, community enhancement

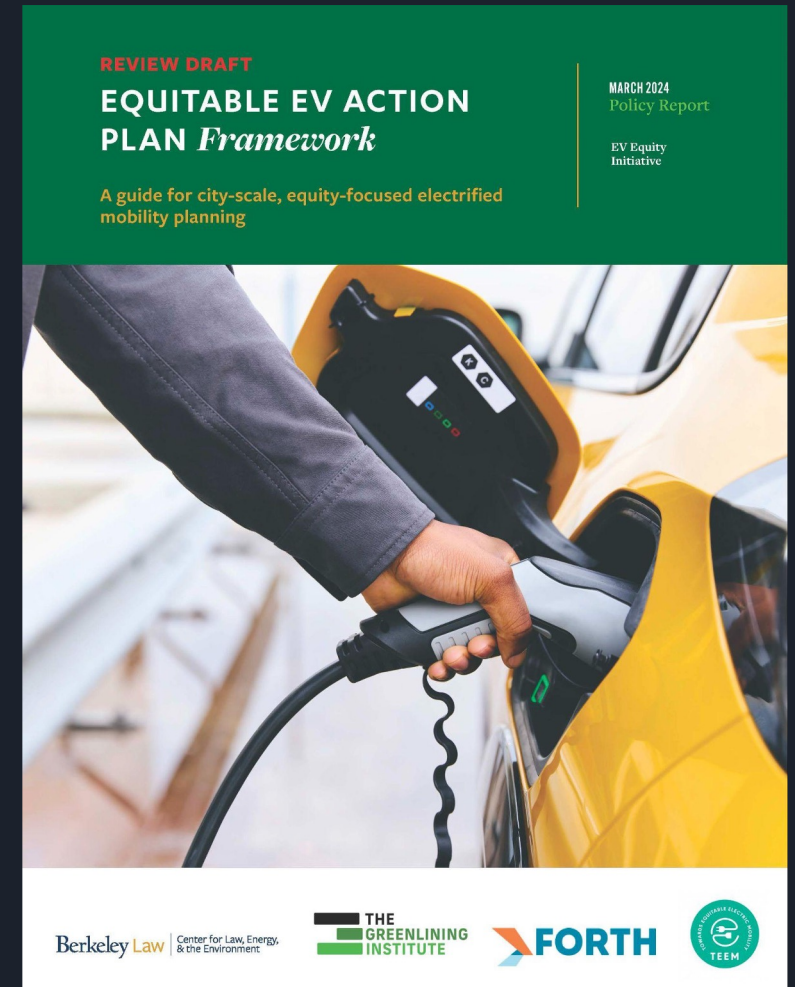
Equitable EV Action Plan Framework

- Template/guidebook for local EV/ZE mobility transition action plans, with a focus on equity
- Detailed strategies and examples for each substantive area of local EV/e-mobility policy
- Collaboration with Greenlining Institute and Forth Mobility
- Peer/stakeholder review process throughout 2024



Equitable EV Action Plan Framework: Focus Areas

- City Leadership Opportunities and City Fleet Electrification
- Public and Curbside EV Charging
- Residential (Single-Family and Multifamily) EV Charging
- Workplace EV Charging
- Physical Infrastructure Design, Safety, Security, and Accessibility
- Shared Mobility and Electric Micromobility
- Passenger Vehicle Access and Incentive
- Medium- and Heavy-Duty Vehicles and Charging
- Engagement, Participation, and Benefits for Communities
- Implementation and Funding





Mapping Platform

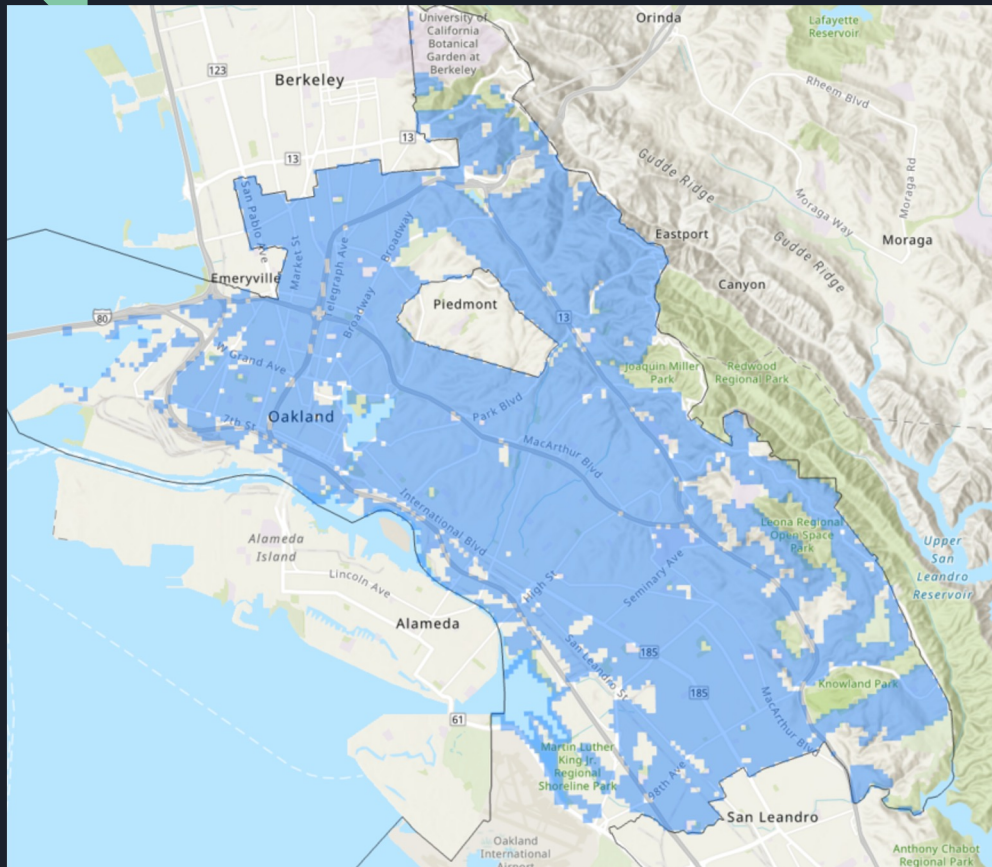
Our mapping tool will help local governments and stakeholders make decisions around EV charger and ZE mobility infrastructure siting while centering equity and community-informed decision-making

1. **Data-rich:** pixel-grid approach integrates diverse data layers
2. **Flexible/tailored to local context:** user selects criteria and can layer in more
3. **User-friendly**
4. **Free, publicly accessible:** for local agencies, community groups, developers

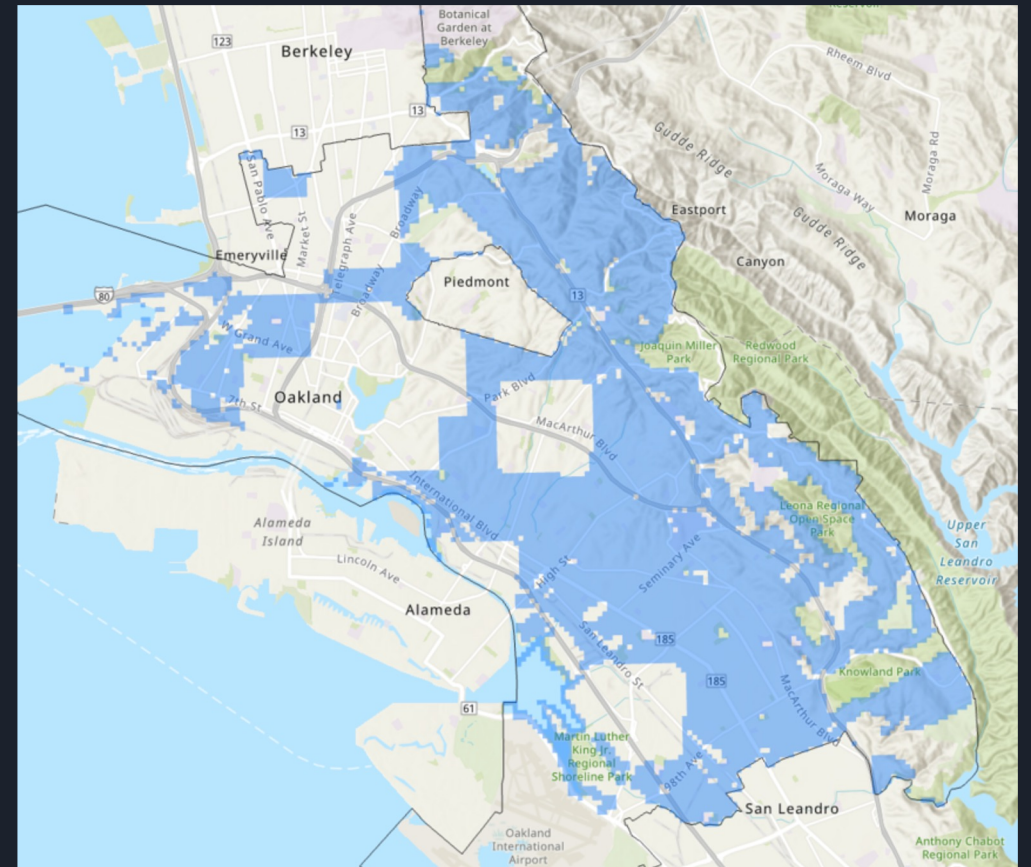
Architecture: 3 types of layers

Priority (where does a city <i>want</i> to target infrastructure, to meet the needs of its residents and communities?)	CalEnviroScreen, USEPA EJScreen/Justice40, local equivalents Renters and MF residents MF residential and commercial zoning Existing charger proximity/EV registration
Feasibility (where is a city <i>able</i> to locate infrastructure, based on funding availability, power capacity, conflicting/preferred uses, or other infrastructural limitations or enablers?)	NEVI + 30C tax credit eligibility Grid capacity Substation proximity
Co-location points (i.e. - where might a city government want to co-locate charging infrastructure to maximize convenience, utility, economic development/community goals?)	Community + commercial resources Transportation hubs Multifamily dwellings

Priority



All population pixels



... & not 10-min drivable to DCFC

Priority

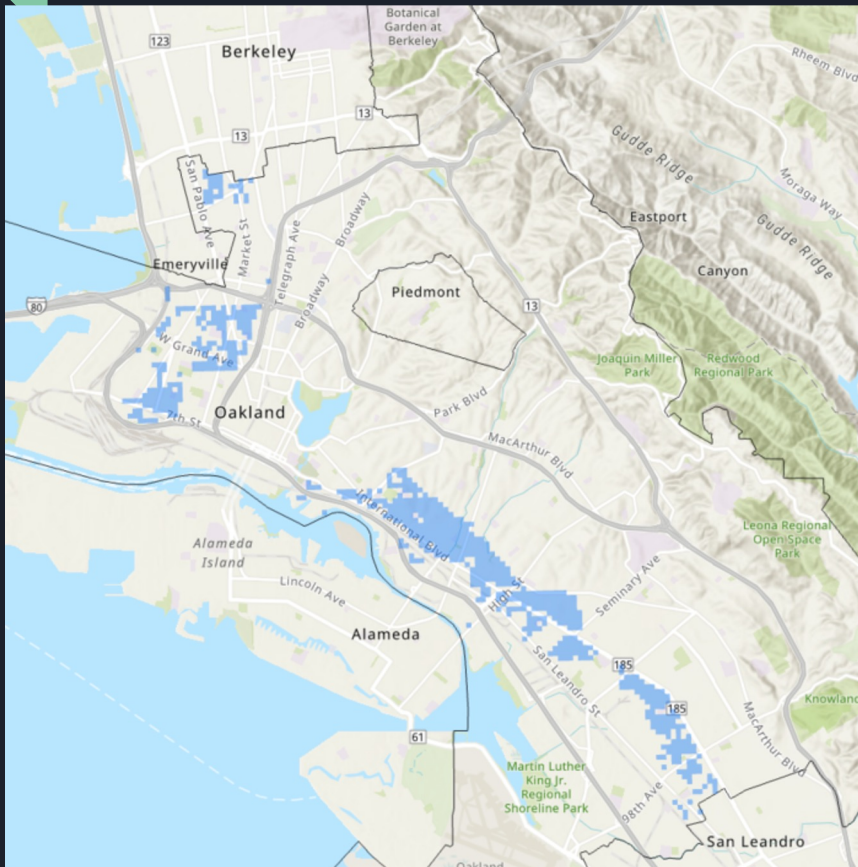


... & not walkable to L2 charger

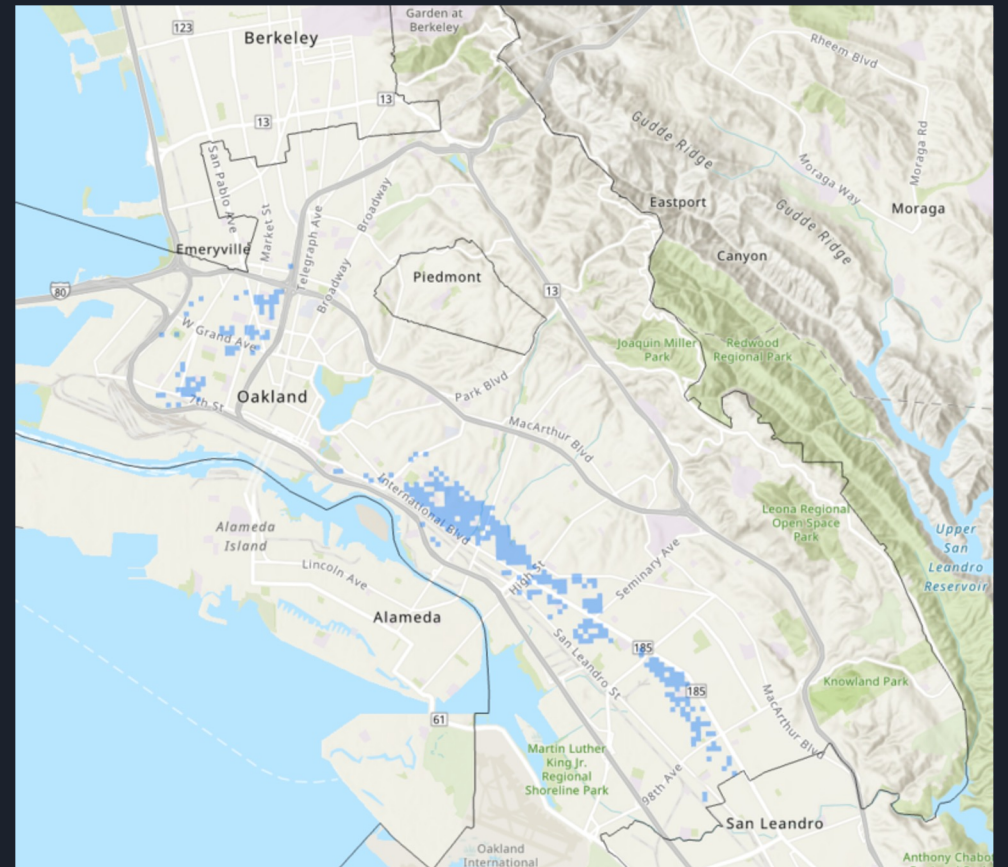


... & \geq 70% percentile CalEnviroScreen composite

Priority

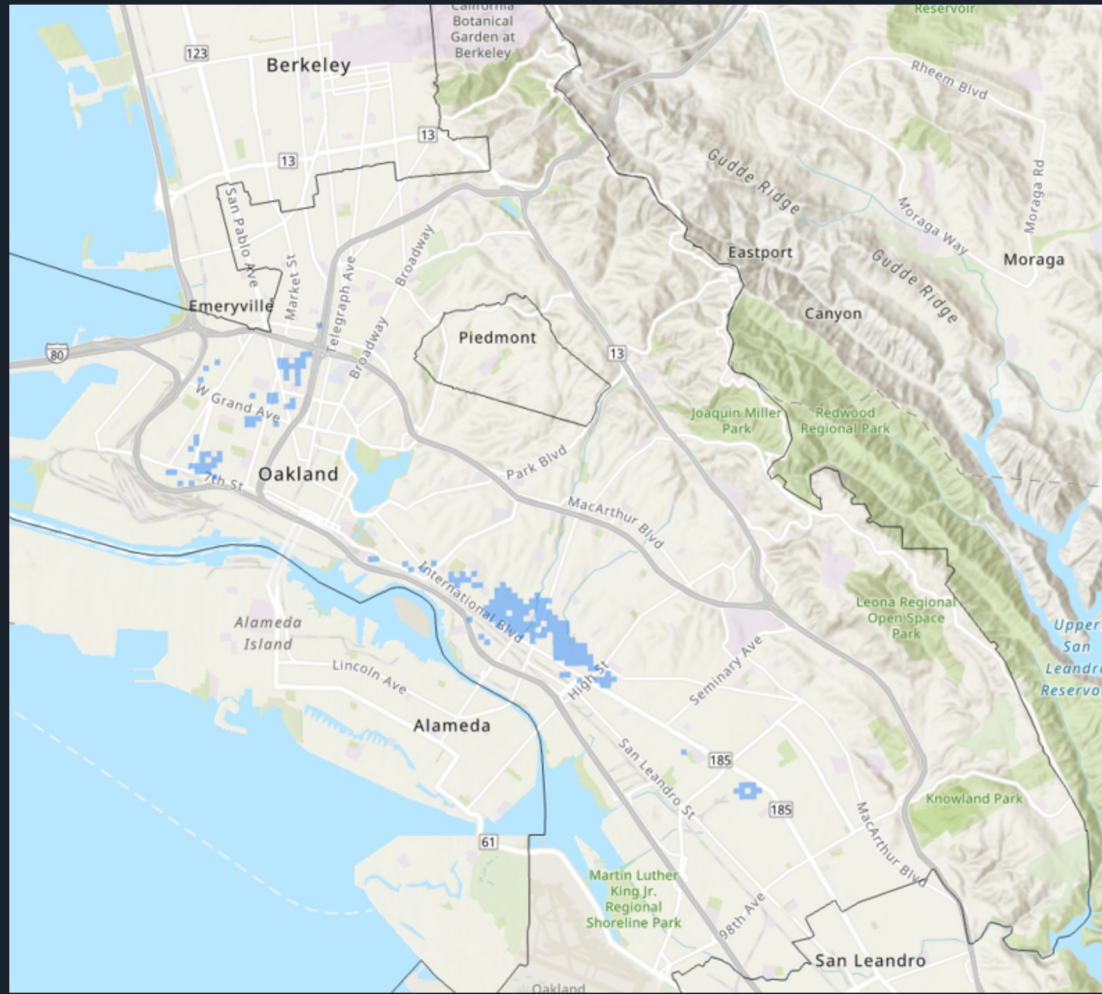


... & \geq ~25 multi-family residents in pixel



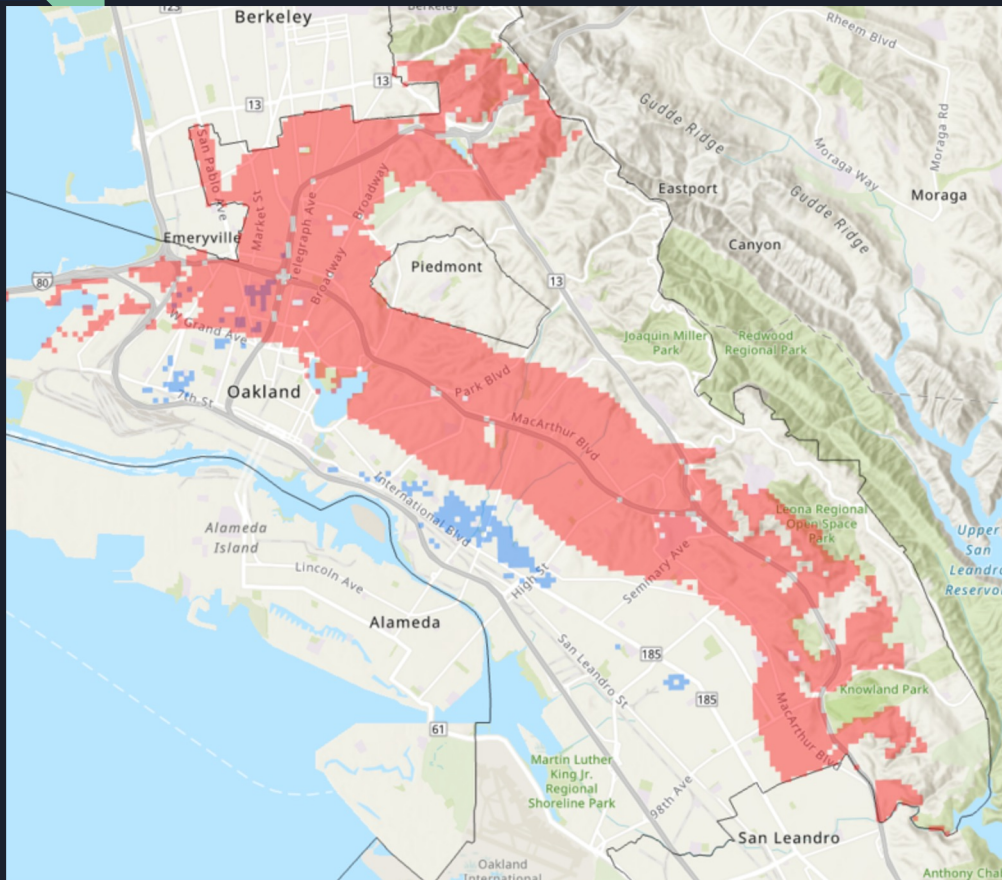
... & \geq ~60 renters in pixel

Priority

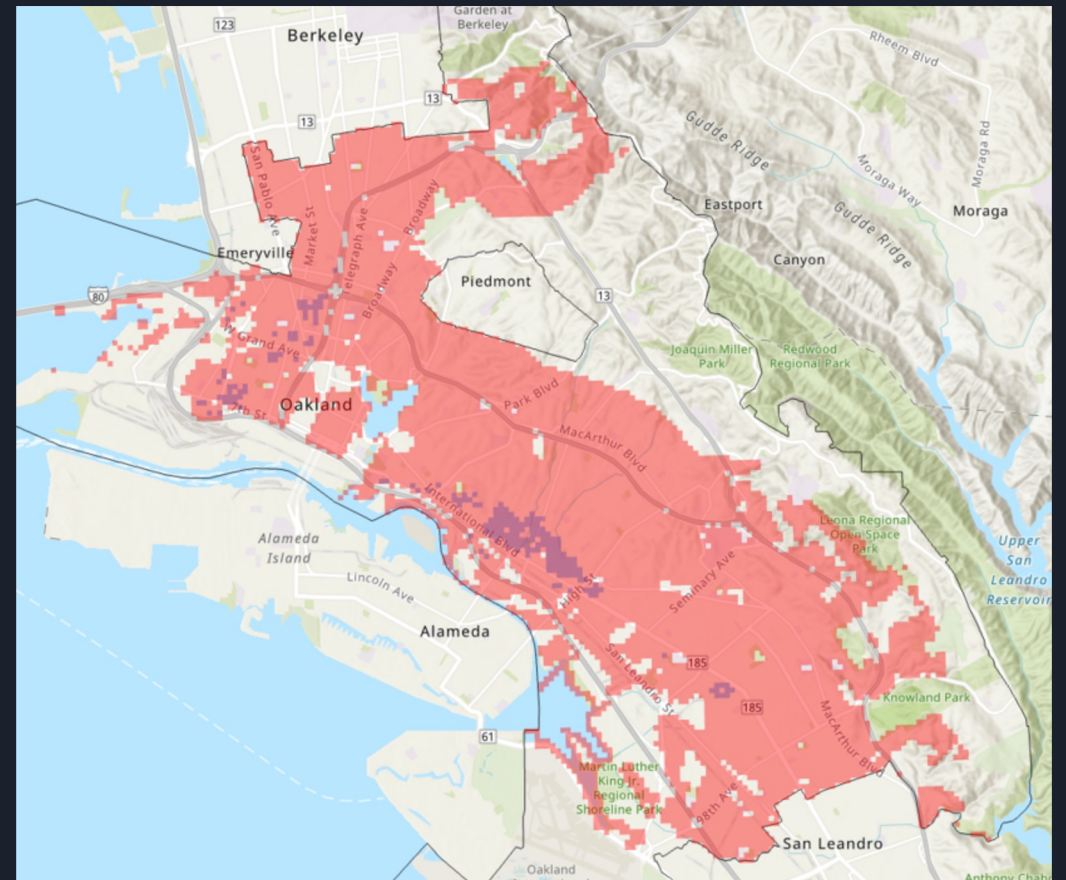


... & \geq 50% multi-family, mixed-use, or commercially zoned

Priority + feasibility

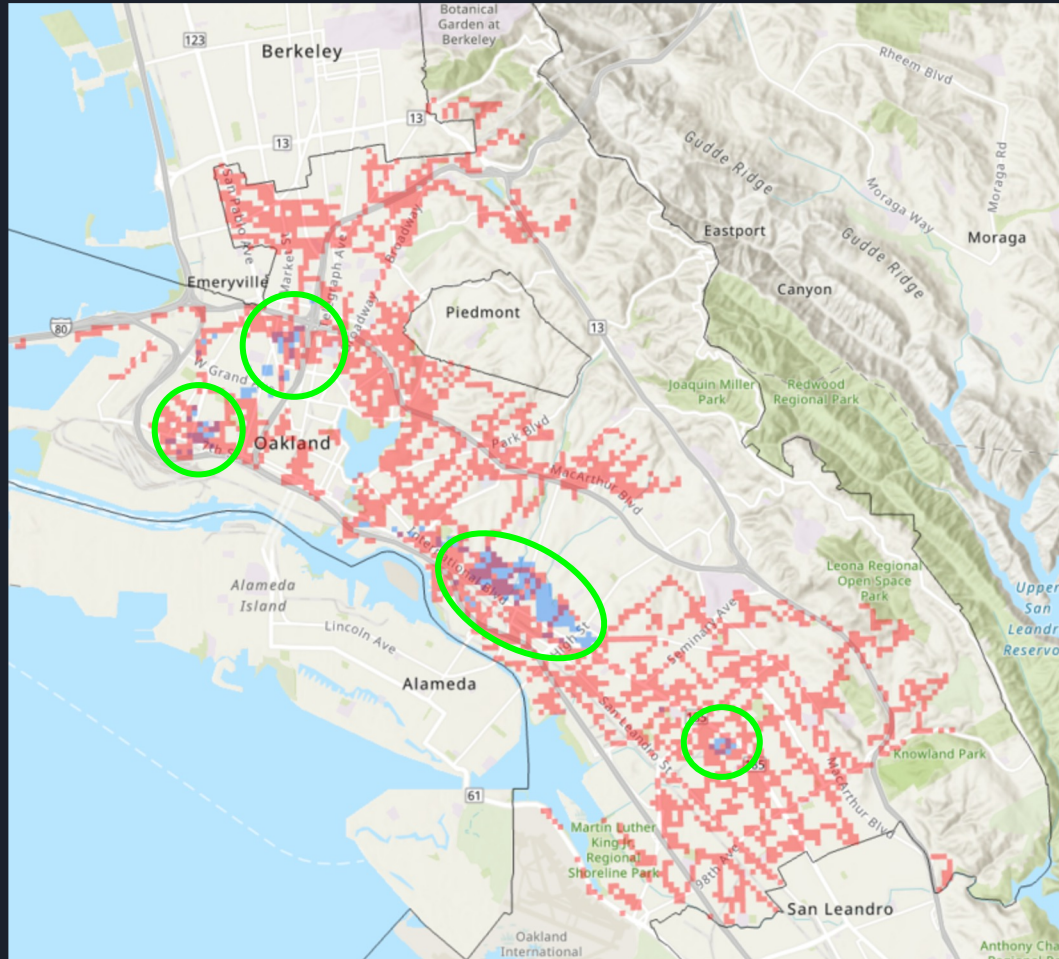


... & NEVI funding eligible



... OR IRS 30C eligible





Priority + feasibility

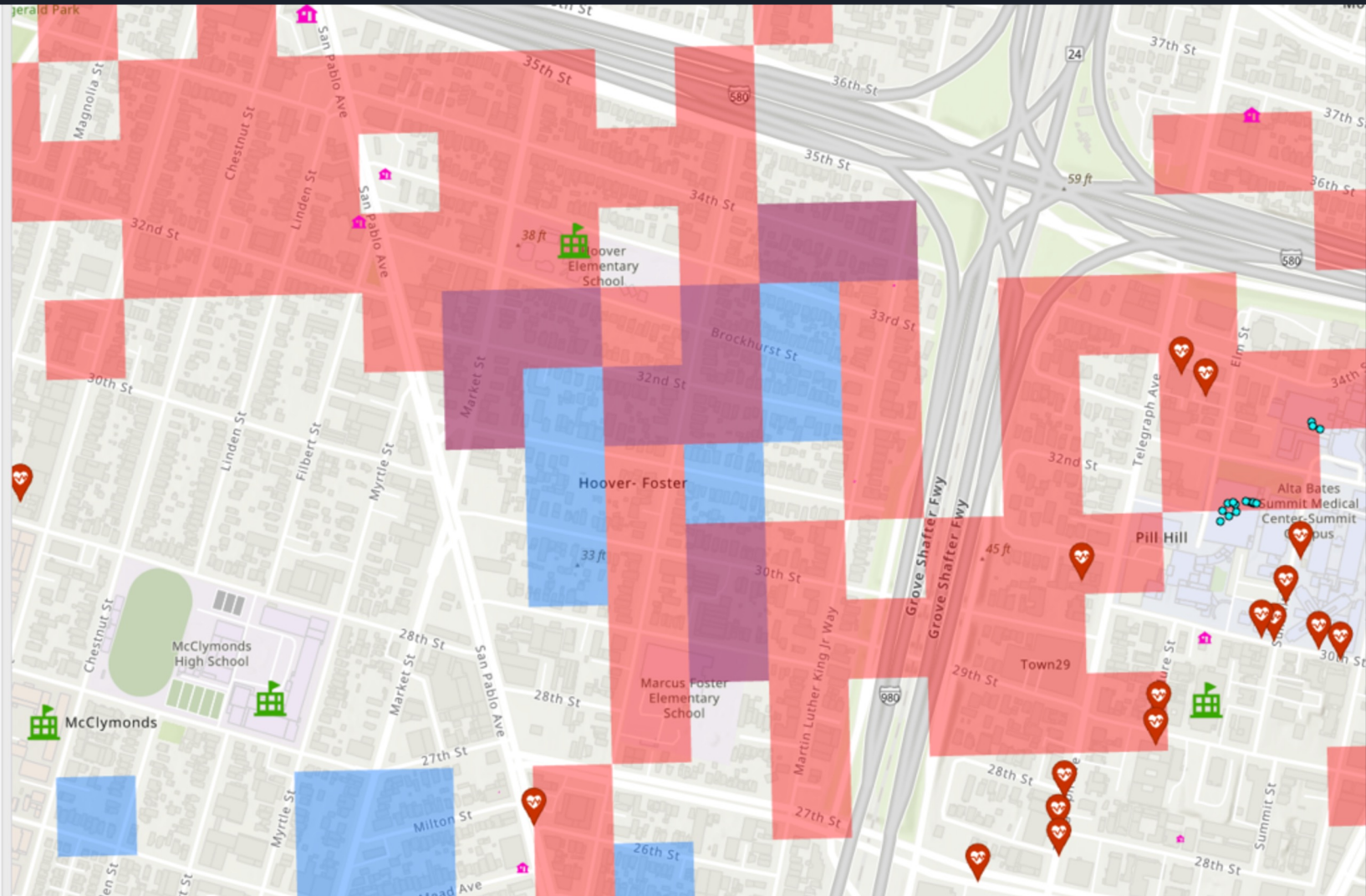


... & within 200ft of 600 kW of PG&E load capacity (i.e., “sufficient” capacity)

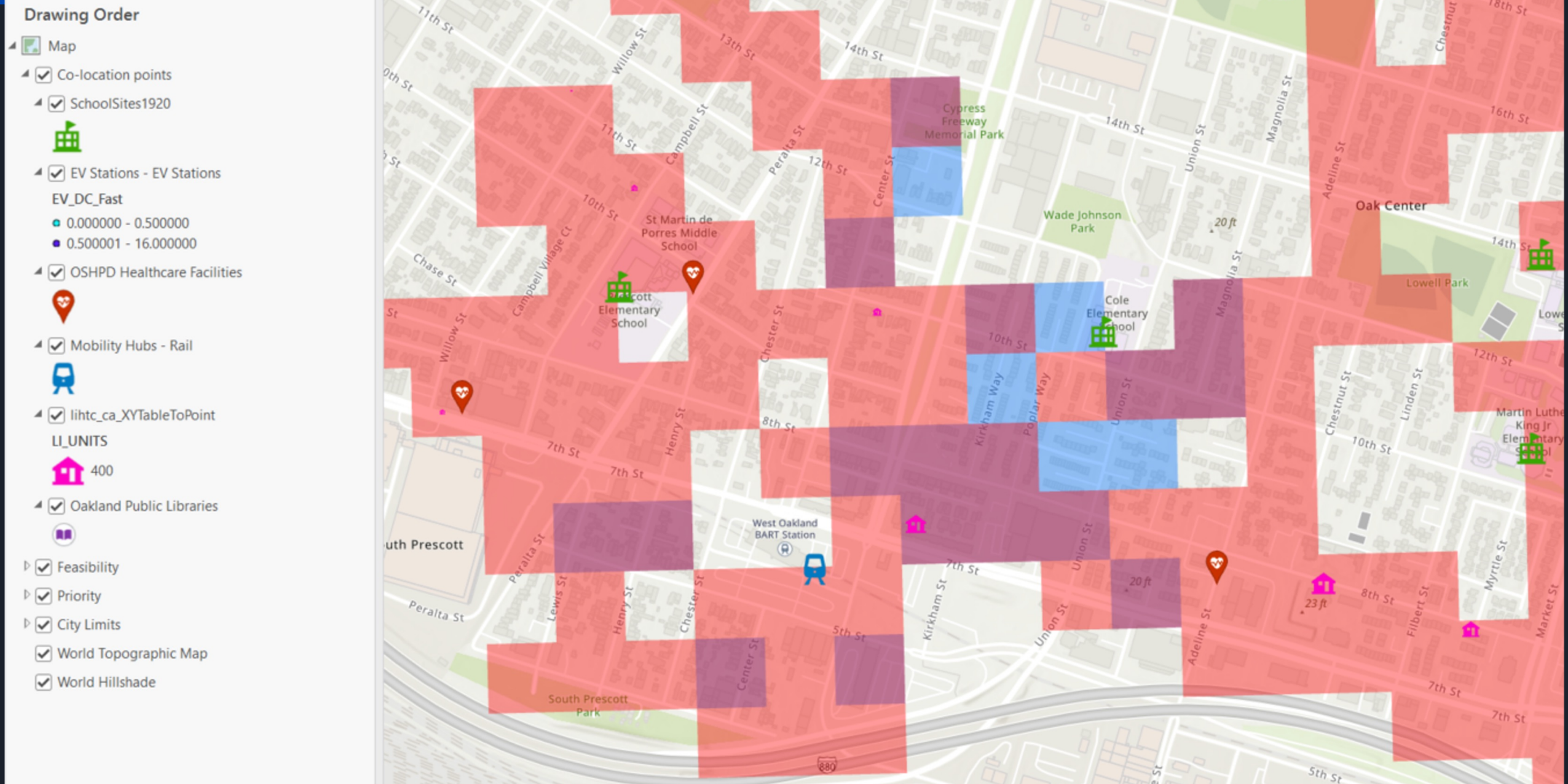
Overlay zone: Hoover-Foster

Drawing Order

- Map
- Co-location points
- SchoolSites1920
 - 
- EV Stations - EV Stations
 - EV_DC_Fast
 - 0.000000 - 0.500000
 - 0.500001 - 16.000000
- OSHPD Healthcare Facilities
 - 
- Mobility Hubs - Rail
 - 
- lihtc_ca_XYTableToPoint
 - LI_UNITS
 - 400
- Oakland Public Libraries
 - 
- Feasibility
- Priority
- City Limits
- World Topographic Map
- World Hillshade



Overlay zone: West Oakland BART



Overlay zone: Fruitvale

Drawing Order



Co-location points

SchoolSites1920



EV Stations - EV Stations

EV_DC_Fast

● 0.000000 - 0.500000

● 0.500001 - 16.000000

OSHPD Healthcare Facilities



Mobility Hubs - Rail



lihtc_ca_XYTableToPoint

LI_UNITS



400

Oakland Public Libraries



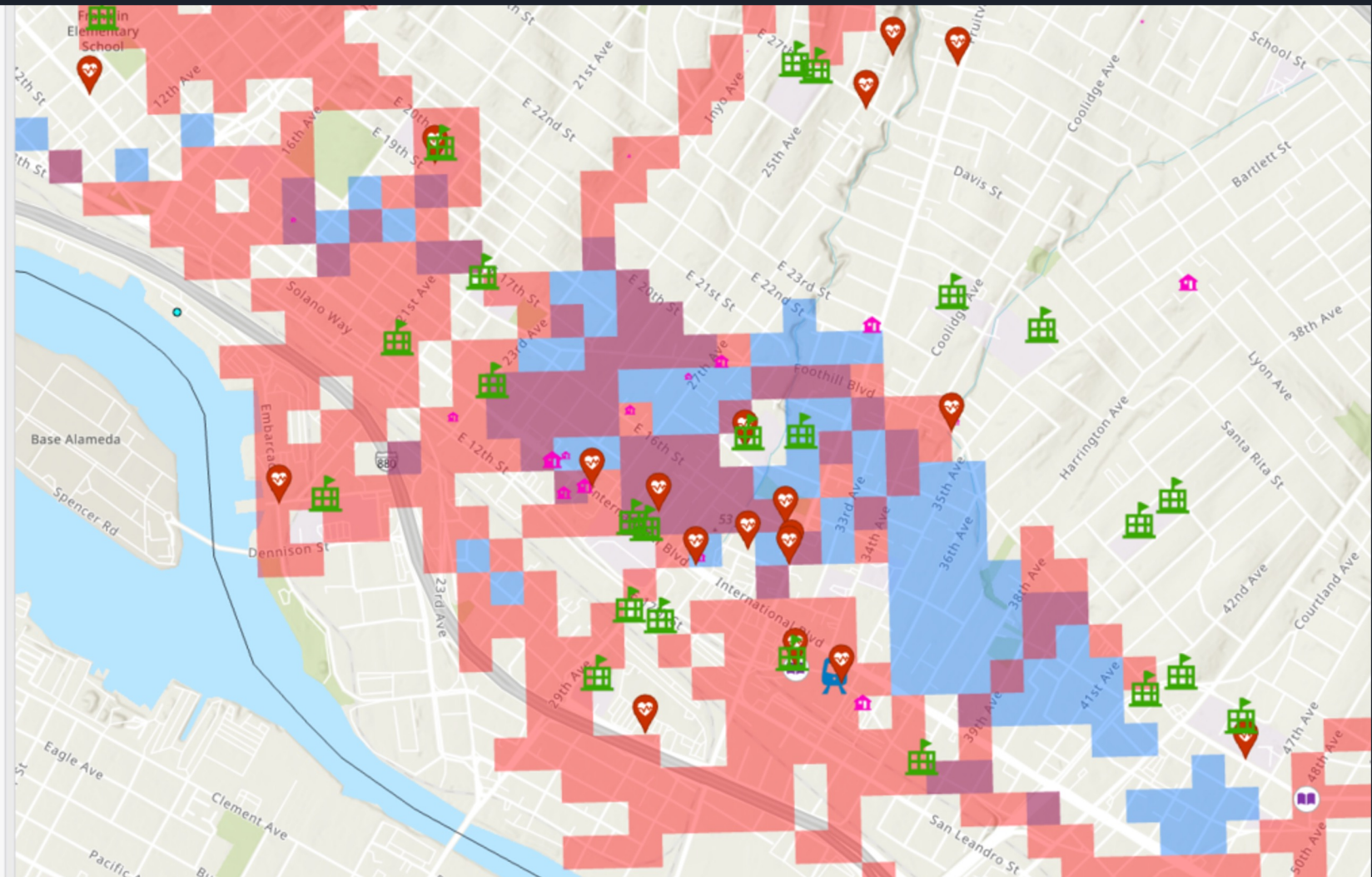
Feasibility

Priority

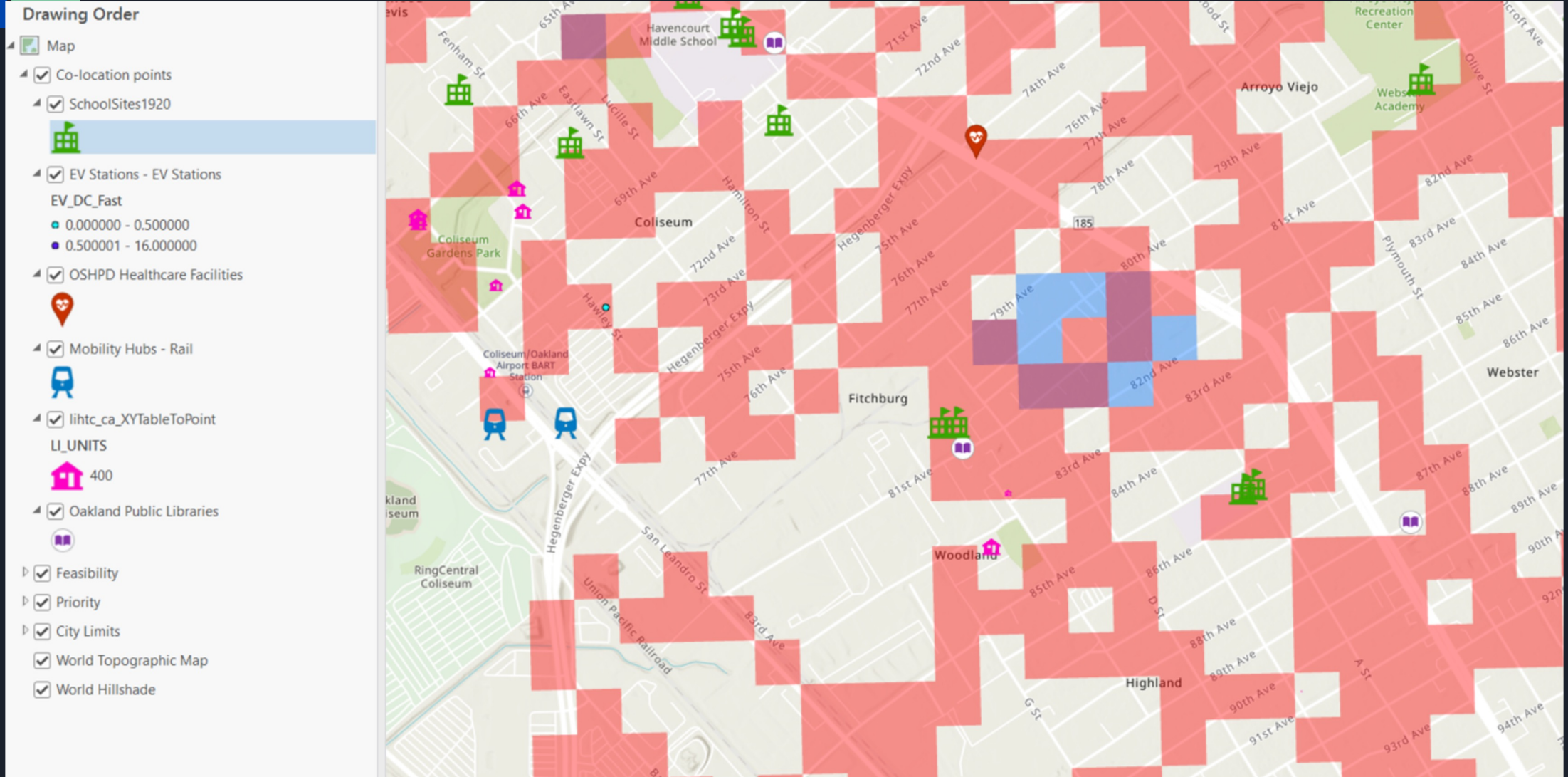
City Limits

World Topographic Map

World Hillshade



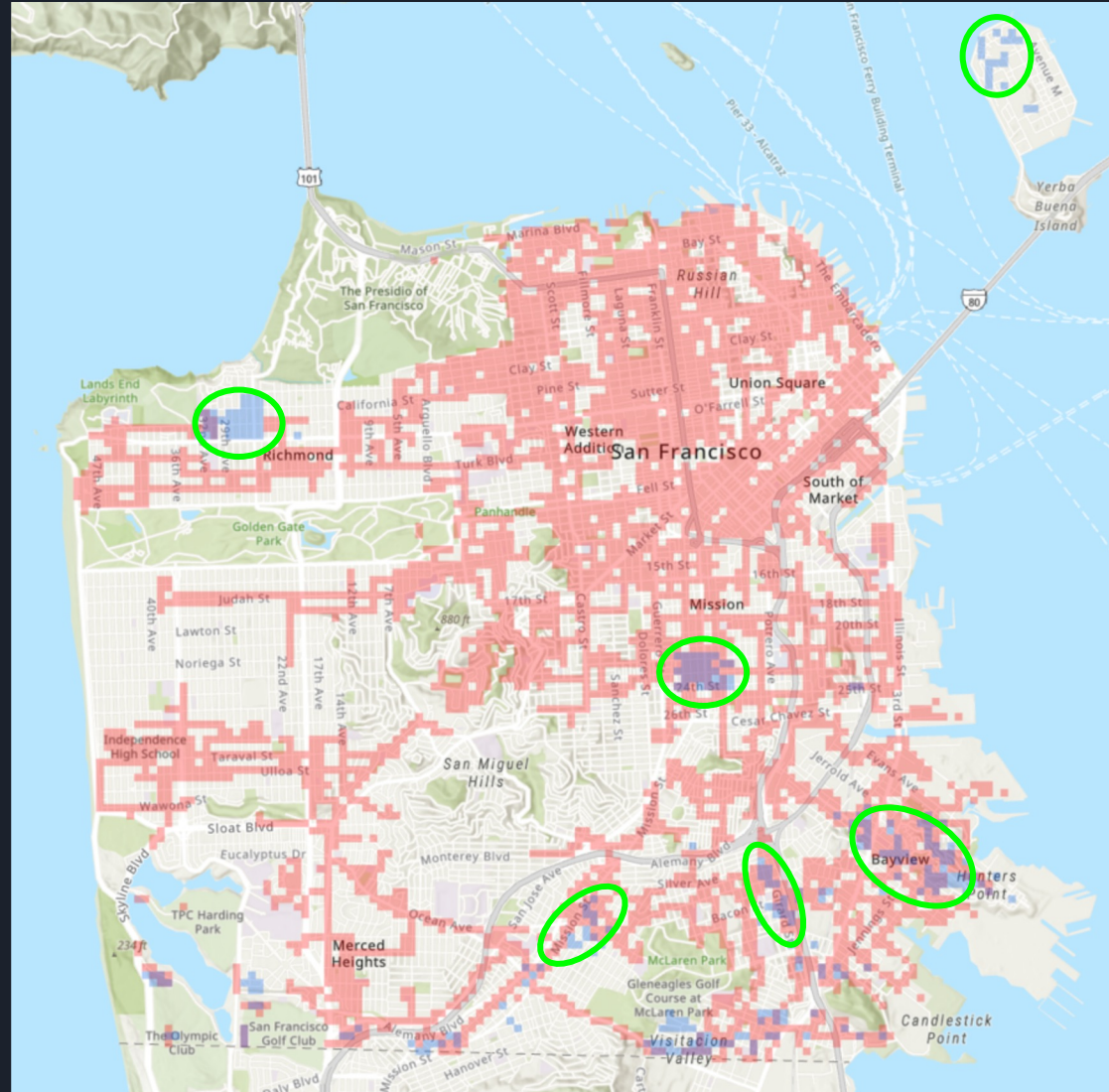
Overlay zone: Fitchburg



San Francisco: priority + feasibility

Priority:

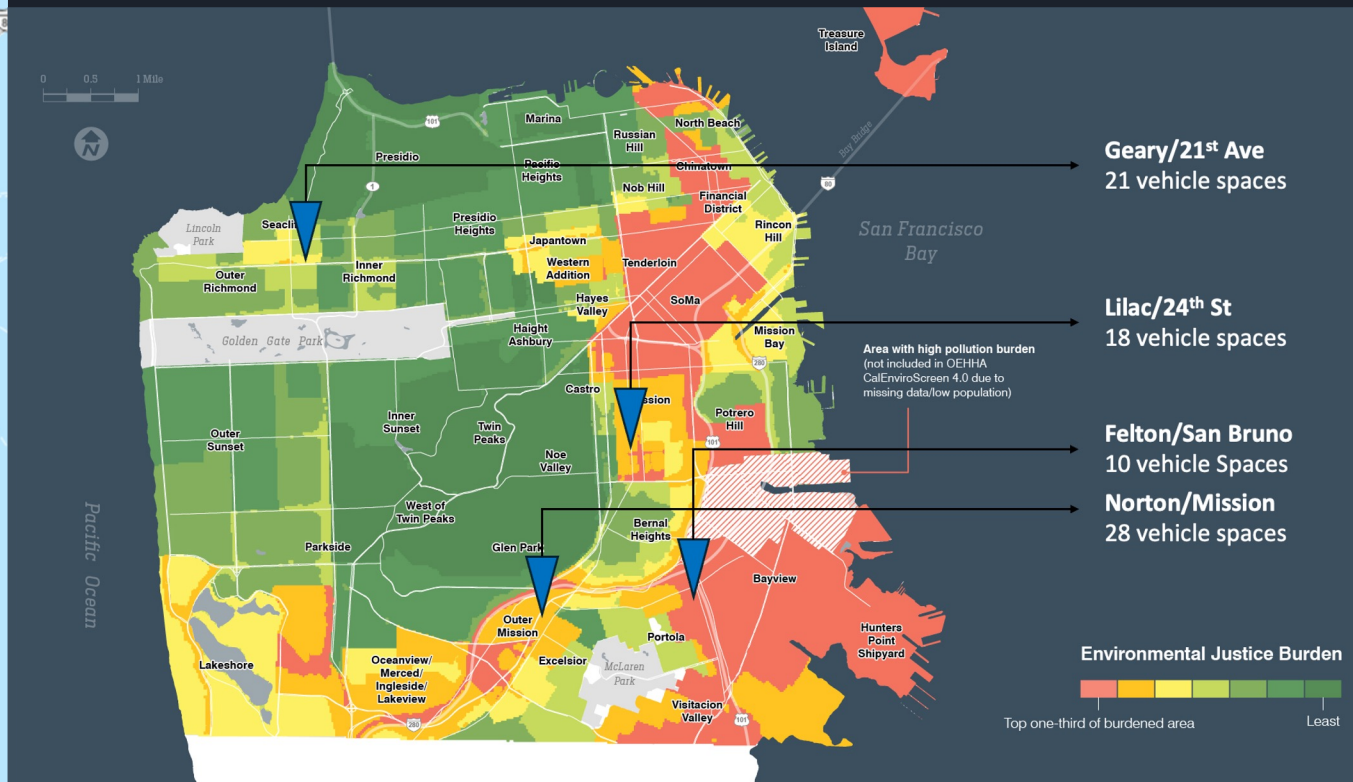
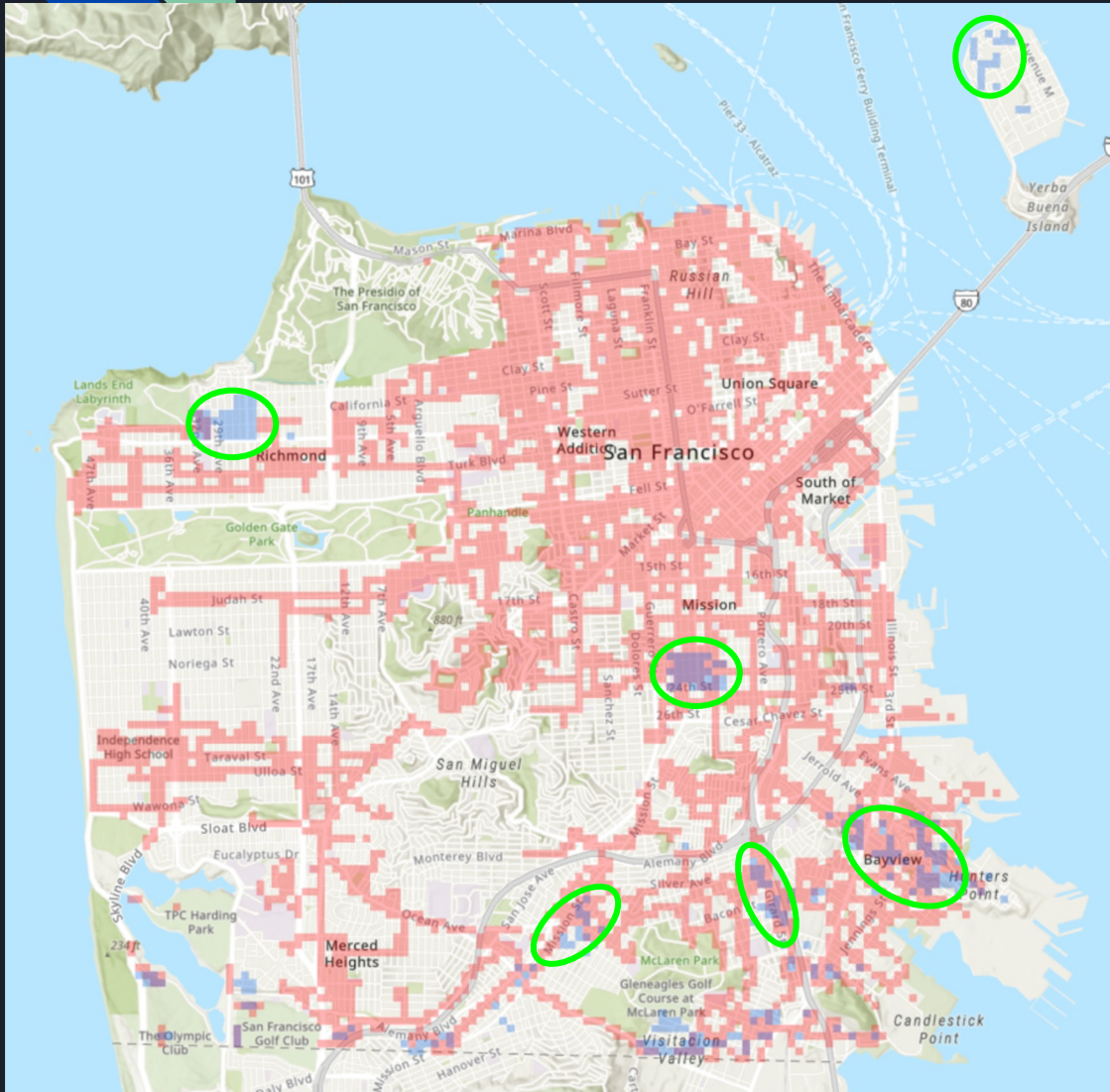
- *SF EJ score* \geq 15 (out of 30)
- Not walkable to L2 or drivable to DCF
- \geq ~30 multi-family residents
- \geq ~60 renters



Feasibility:

- Eligible for NEVI or IRS 30c funding
- Within 200 ft of 600 kW of PG&E load capacity (note Treasure Island is not serviced by PG&E)

San Francisco: city-owned parking





Questions?

<https://www.law.berkeley.edu/research/cee/ev-equity/>

tlamm@law.berkeley.edu

Thank you!

Announcements / Roundtable Updates

- **Networking:** After the updates, please visit the Vendor Expo, which concludes at 1:30 pm. Lunch is available in this room; feel free to eat here or bring it into the Atrium.
- **Funding Navigator Group:** Please find CTE at the security desk at 12:50 PM to be accompanied to your conference room.
- **Roundtable:** Please raise your hand for the opportunity to speak.
- Following the updates, the virtual meeting will adjourn.



Thank You

- Silicon Valley Bicycle Coalition, The New Wheel, Berkeley E-Bike Equity Project, Waterside Workshops, RAD Power Bikes, Bike Connection, Mitra EV, Ridepanda, The Vegetarian Gourmet
- **Join our mailing list** to hear about news and upcoming events!

EV Coordinating Council Email List Sign Up

SUBSCRIBE

Contact Us

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ev.council@acterra.org

