# City of Alameda
# DRAFT
# EV Charging Existing Conditions and Needs Assessment

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## Background

The City of Alameda's Climate Action and Resiliency Plan (CARP) calls for the City to reduce its greenhouse gas emissions by 50 percent below 2005 levels by 2030 and become carbon neutral as soon as possible. Transportation accounts for 70 percent of greenhouse gas emissions within the City of Alameda. The City's first priority is to support residents walking, biking and taking transit whenever possible. However, for those trips that cannot be taken by other modes, electrical vehicles (EVs) are an important part of the solution to decrease transportation emissions, allowing residents to tap into Alameda Municipal Power's (AMP) affordable, 100-percent clean electricity for their transportation needs.

Alameda Municipal Power (AMP) is the City's not-for-profit electric utility and is a key stakeholder in the City's plan to install public EV chargers. AMP provides 100% clean electricity at rates on average 36% lower than PG&E, saving Alamedans an estimated $42 million a year in electricity costs. AMP's EV Adoption Implementation Plan includes expanded Used EV and EV Charger rebates, EV Workshops, Marketing Campaign, Ride and Drive events, EV Alley at Classic Car shows, and an AMP Speakers Bureau. These programs are funded by Low Carbon Fuel Standard Credits (LCFS).

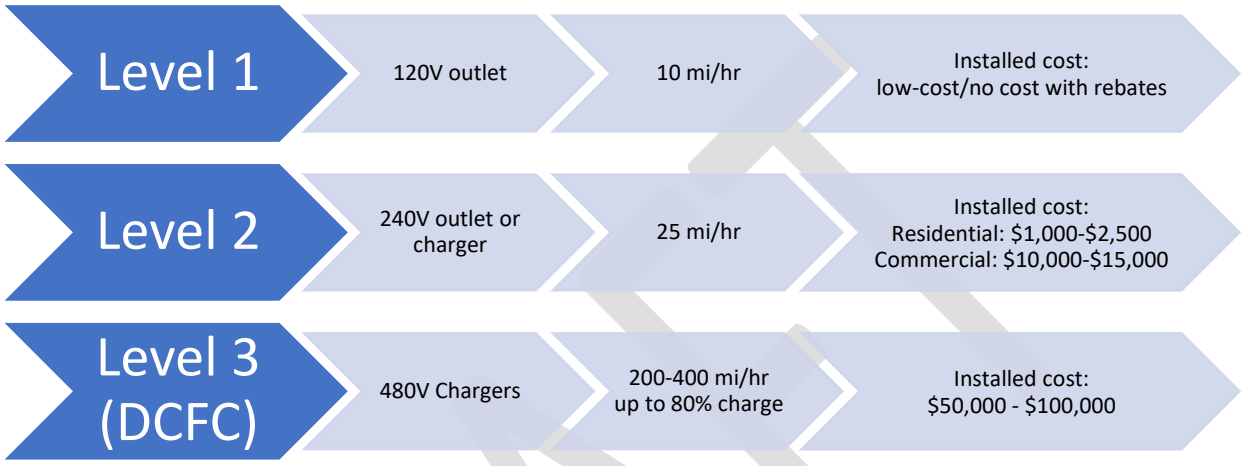
Since 2017, the number of registered EVs in Alameda has more than doubled and now stands at 5.2% of all registered vehicles in the city. Statewide, more than 10% of new car sales are electric. Beginning in 2026, California will begin requiring automakers to have a significant portion of their sales inventory as zero-emission (ZEV) or plug-in hybrid (PHEV) vehicles. The threshold will begin at 35 percent of all vehicles sales and gradually increase each year until 2035 when all vehicles sold must be a ZEV or PHEV. California has also set a goal of creating 250,000 chargers statewide by 2025. On a federal level, the Biden-Harris administration has announced goals of building 500,000 chargers nationwide and increasing EV sales to 50 percent of total sales, by 2030. Funding is being provided by both the state and federal government to assist cities and organizations in achieving these goals.

A 2019 survey conducted by AMP found that the majority of EV owners charge at home and two-thirds drive less than 40 miles a day. For EV owners that live in single-family homes with driveways or garages, adding chargers is relatively straightforward. The City also requires that EV chargers be installed in all new residential and commercial buildings. AMP provides rebates to install chargers EV chargers at residential and commercial properties. However, for single family home owners without a driveway or garage, renters and multi-family apartment dwellers, access to home charging is much more complicated. The City does not allow a homeowner to create a new curb cut and pave their front or side yard to install and EV charger and owners are also not allowed to run a charging cable across the sidewalk to charge their vehicle on the street. These rules could be reviewed, however in most cases, it would require privatizing a public parking space on the street for private use by a single individual. Creating additional impervious surfaces and privatizing public parking spots does not meet other citywide goals.

Additional options are needed to support all residents in Alameda, including those who are unable to charge at home, to own and affordably charge electric vehicles. The purpose of this memo is to review the current state of EV charging in Alameda and identify strategic actions to increase clean transportation options citywide and support owners who wish to purchase electric vehicles by providing affordable, accessible public EV charging throughout the city.

## Types of EV Chargers

Electric vehicles can be charged using three charging speeds.[1]




### Level 1 Charging

The slowest, Level 1 equipment, provides charging through a common residential 120-volt (120V) AC outlet. Depending on battery type, charger configuration and circuit capacity, Level 2 charging adds about 10 miles of range per hour of charging time. Level 1 chargers can take 20-30 hours to charge a battery electric vehicle (BEV) from empty and 5-6 hours to charge a plug-in hybrid electric vehicle (PHEV) from empty. Level 1 chargers are typically only used for home charging.

### Level 2 Charging

Level 2 equipment offers charging through 240V (in residential applications) or 208V (in commercial applications) electrical service, and is common for home, workplace, and public charging. Depending on battery type, charger configuration and circuit capacity, Level 2 charging adds about 25 miles of range per hour of charging time. Level 2 chargers can charge a BEV from empty in 4-10 hours and a PHEV from empty in 1-2 hours. Level 2 require less infrastructure than Level 3 or DCFC chargers which can make them a cost-effective option in long-term public parking locations. Many residents use Level 2 chargers for their home charger.

### Level 3 or Direct Current Fast Charging (DCFC)

The fastest speed is direct current fast charging (DCFC) equipment. DCFC equipment can charge an EV to 80 percent in just 20 minutes to 1 hour, providing 200 to 400 miles per hour. Most plug-in hybrid vehicles currently on the market do not work with fast chargers. DCFC charging is best implemented in areas where high turnover can be expected such as food establishments, cafes, grocery stores, or gas

[1] https://www.transportation.gov/rural/ev/toolkit/ev-basics/charging-speeds

stations. Fast chargers are also ideal for freeway users on longer trips who are looking to make a quick recharge before setting off. This type of charger typically requires an electrical infrastructure upgrade, such as installing a new transformer, which can significantly increase total project costs. DCFC infrastructure requires more space as well, which can present barriers in space-restrictive areas such a parking structure or a small parking lot.

### Developing Technology

Newer charging technology coming on the market may accomplish DCFC charging speeds without the need for costly infrastructure upgrades. One example of this technology is an EV charger that utilizes batteries within its shell to produce fast charging voltage while only requiring Level 2 electrical infrastructure. These chargers have a higher upfront cost but are also eligible for fast charging grants and rebates that may make them viable within Alameda.

## Charging Locations

### Home Charging

Charging EVs at home is the lowest cost, most convenient charging option. The City of Alameda provides streamlined permitting for home EV charging and AMP provides rebates for chargers at single- and multi-family dwellings. Installing home chargers is simplest when a dedicated off-street parking site is available. Providing home charging is more challenging for single-family owners without driveways or parking garages, renters and multi-family dwellers.

Current zoning does not allow a homeowner to create a new curb cut and pave their front or side yard to install an EV charger and owners are also not allowed to run a charging cable across the sidewalk to charge their vehicle on the street. Revisions to these rules in many cases would require privatizing a public parking space for private use by a single individual, which is in conflict with other citywide policies and the only residents who would likely benefit from such a rule change are a small number of single-family homeowners, which does not support the city's equity goals. Creating additional pervious surface and privatizing public parking spots does not meet other citywide goals.

Charging at multi-family residences is challenging due to the increases expense of installation and operation, often constrained electrical panel capacity, and questions about who pays for electricity and installation. AMP provides up to $48,000 rebate for Level 2 chargers at multi-family buildings. However, in recent years, few multi-family property owners have taken advantage of this rebate. State law provides tenants with the right to request and install charging stations at the tenant's expense. All new residential developments in Alameda are also required to provide EV charging for tenants.

### Workplace Charging

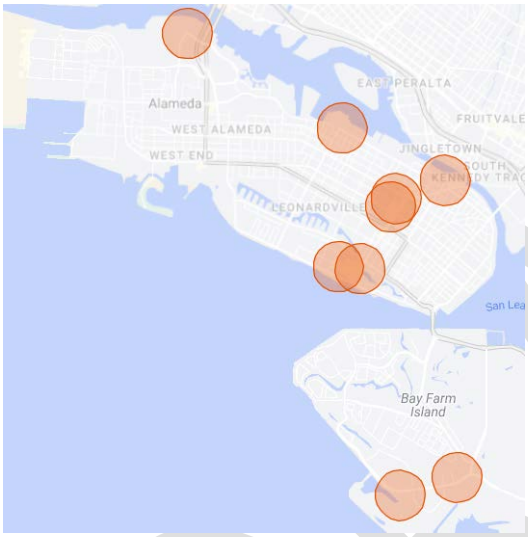
Workplace charging is also very convenient for EV owners and studies show that commuters are six times more likely to drive an EV if their workplace offers charging.[2] Workplace charging provides an alternative primary charging option for EV owners and enables more people to own an EV even if home charging is not available. Workplace charging also encourages daytime charging when renewable electricity is in greater supply and more affordable. AMP provides up to $39,000 for Level 2 chargers at

[2] US DOE, 2015 and US DOE, 2016

commercial businesses. In Alameda, many residents telecommute or take transit to work, making workplace charging a less attractive option for EV charging.

## Public Charging

Public charging allows both residents and visitors to conveniently charge their vehicle while meeting their other daily needs such as shopping, visiting the park or dining out. Public charging eliminates the upfront cost of purchasing at home chargers, making them accessible to everyone. Public charging can be either Level 2 or DCFC depending on the capacity and space available at the lot and whether it is a long or short-term parking lot. AMP provides up to $39,000 for Level 2 chargers at commercial or government locations.

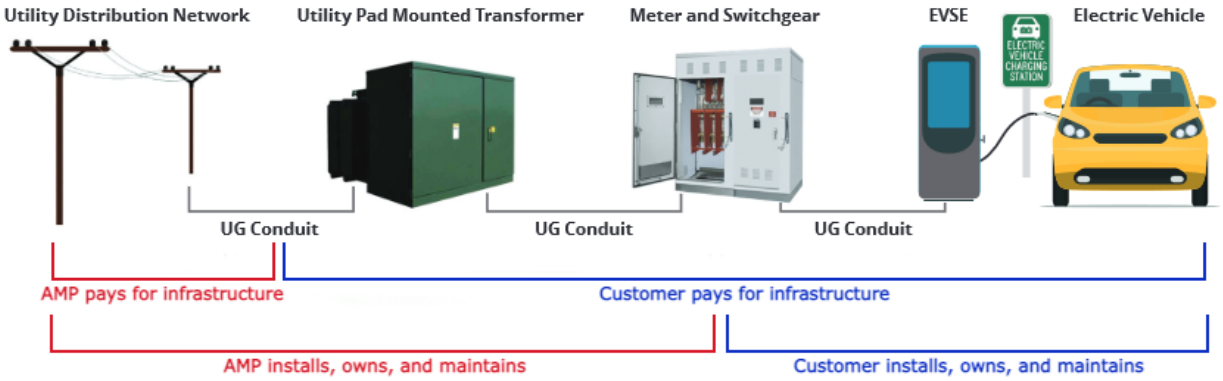



Alameda currently has nine public EV charging stations currently as shown in the map.[3] A quarter mile radius is shown around each location. Of the nine charging locations, one has only Tesla superchargers, two are primarily for employee parking, and the chargers at Home2Suites are labeled as for guests only, leaving three public fast charging stations with 9 total ports and two public Level 2 charging stations with six ports.

| Site Name | Site Address | Level of Charging | Number of Ports |
|---|---|---|---|
| **Target Parking Lot** | 2700 5th Street | DCFC | 6 |
| **Nob Hill Foods** | 2531 Blanding Ave | DCFC | 2 |
| **Alameda Municipal Power** | 2000 Grand St | DCFC | 4 |
| **Civic Center Garage** | 1416 Oak St | L2 | 4 |
| **South Shore Ctr (West)** | 2210 South Shore Center | L2 | 2 |
| **South Shore Ctr (East)** | 523 South Shore Center | Tesla only | 12 |
| **Broadway Management (Employee)** | 1516 Oak St | L2 | 2 |
| **Harbor Bay Park (Employee)** | 1131-1151 Harbor Bay Parkway | L2 | 14 |
| **Home2Suites (Guest)** | 1660 Harbor Bay Parkway | L2 | 2 |

3 https://afdc.energy.gov/fuels/electricity_locations.html#/find/nearest?fuel=ELEC&location=Alameda,%20ca&page=9

In most cases, DCFC are preferred for public chargers, which typically require installation of a new transformer to support the additional electric load. AMP requires that any infrastructure upgrades on the AMP side of the meter are the responsibility of the customer as shown in the graphic below.




## City Action Plan

CARP calls for EV charging stations to be installed in all City-owned parking lots and to explore curbside EV charging options. Staff believe public curbside charging adjacent to public facilities is the simplest way forward initially for curbside charging and can help fill in the network where public parking facilities are not available, such as near residential neighborhoods. In order to achieve these CARP goals, staff is proposing the following actions:

- Develop a prioritized list of public EV charging sites to install EV charging.
- Pursue state and federal funding to upgrade infrastructure as needed and offset the costs of installing EV charging.
- Enter into an agreement with a single third-party organization to install, manage, and maintain the network of public EV charging sites on behalf of the City.
- Study feasibility of curbside EV charging adjacent to public facilities such as parks and schools with a focus on MUD hotspots not well served by other public parking locations.
- Support owners to install public EV charging in publicly accessible, privately owned lots, such as shopping centers.

## Alameda Public EV Charging Goals

Staff has developed the following draft goals in regards to public EV charging:

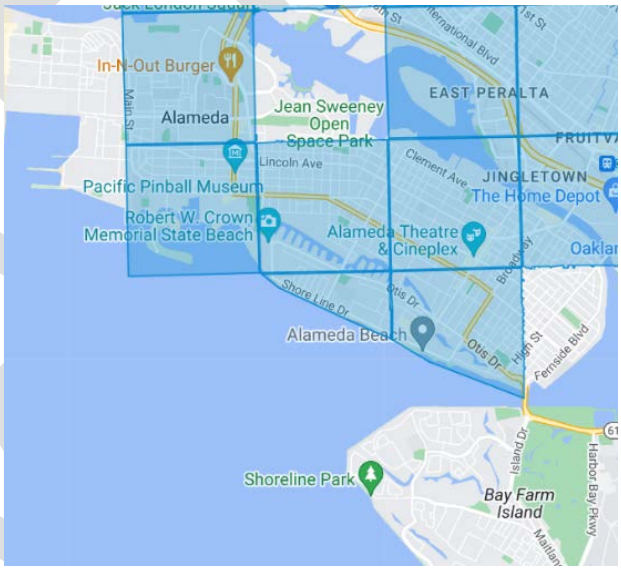
- Provide affordable public EV chargers within a quarter-mile of all residents within Alameda and within 0.1 miles of multi-unit development hot spots.
- Prioritize DCFC at parks, commercial areas and other short-term parking locations when possible.
- Provide overnight Level 2 charging options in long-term parking lots such as Civic Center garage, ferry terminals, the Park n Ride and others.
- Prioritize chargers in equity priority locations.
- Take advantage of all available funds from federal, state, regional, and local sources to limit costs incurred to the City.

## Equity Priority Locations

State and federal funding is focused on implementing chargers in equity priority locations in alignment with the federal government's Justice 40 initiative, which seeks to direct at least 40% of federal investment towards historically disadvantaged communities. A variety of indicators are used to define Justice 40 communities.

Several maps are used to identify equity priority communities for the purposes of the transportation investments. The historically disadvantaged communities map[4] is shown on the left and multi-unit development (MUD) hotspots[5] is shown on the right. The City is prioritizing installing EV charging infrastructure in these areas where possible.


*Transportation Disadvantaged Census Tracts (Historically Disadvantaged Communities) and Electric Vehicle Charging Justice40 Map*




*MUD Hotspot Map*

The City of Alameda ranks in the 97th percentile nationally for exposure for PM2.5, which is the presence of fine particles or particulate matter (having a diameter of 2.5 micrometers or less) in the surrounding air from sources like burning of fossil fuels, vehicle emissions, and road dust.[6] Alameda ranks in the 78th percentile for diesel particulate matter (DPM), which are tiny particles in the air that come from diesel engine exhaust from sources like diesel-powered vehicles, such as trucks and buses, and industrial activities like shipping, construction and mining. Alameda's exposure to PM2.5 and DPM results from our proximity to I-880, the Port of Oakland and Oakland Airport.

[4] https://usdot.maps.arcgis.com/apps/dashboards/d6f90dfcc8b44525b04c7ce748a3674a and https://anl.maps.arcgis.com/apps/webappviewer/index.html?id=33f3e1fc30bf476099923224a1c1b3ee

[5] https://www.google.com/maps/d/u/0/viewer?mid=1IiJxkT5Rgg7wdcTRpOxplX6f0-tJjuEQ&ll=37.68066537992607%2C-121.9214665&z=11

[6] As shown on the US Department of Transportation Equitable Transportation Community Explorer, which helps understand how a community is experiencing transportation disadvantage compared to all other Census Tracts nationally. https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---National-Results/

Alameda is ranked in the 81st percentile nationally for environmental burden, which includes variables measuring factors such as pollution, hazardous facility exposure, water pollution and the built environment. These environmental burdens can have far-reaching consequences such as health disparities, negative educational outcomes, and economic hardship. Alameda also ranks in the 67th percentile for climate and disaster risk burden, which reflects sea level rise, changes in precipitation, extreme weather, and heat which pose risks to the transportation system.

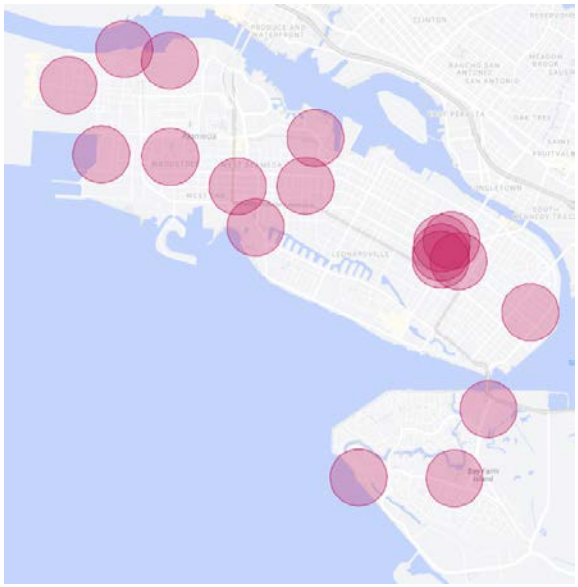
Deploying public EV Charging infrastructure citywide that can support the increased adoption of electric vehicles will help reduce Alamedans' exposure to particulate matter and reduce environmental burden, especially for vulnerable populations.

## Alternative Fuel Corridors

Alternative Fuel Corridors (AFC) are federally-designated highways that will form a national network of EV chargers and other forms of alternative fueling for vehicles. Funding for DC fast charging is being provided by the federal government through multiple grants to establish this network and the relevant highway for Alameda is Interstate 880 which approximately runs along the Alameda-Oakland border. To qualify for AFC funding, a site must be within one driving mile, *not* as the crow flies, of a corridor entrance or exit. The map to the right shows the approximate AFC acceptable zone in Alameda which is on the east side of the island. There are three potential charging locations that may be eligible in this area: Civic Center Garage, Municipal Lot A, and Municipal Lot C.


## Potential City-Owned Sites

The City has identified city-owned sites where public EV charging is potentially viable. After further review and collaboration with Alameda Municipal Power, it has been determined that a number of the sites will require infrastructure upgrades to support EV charging. The map to the left shows the 18 sites listed in the table below as potential charging locations with the preferred charger type. The table below also shows if the sites is in A Justice 40 area or multi-unit development (MUD) hotspot.

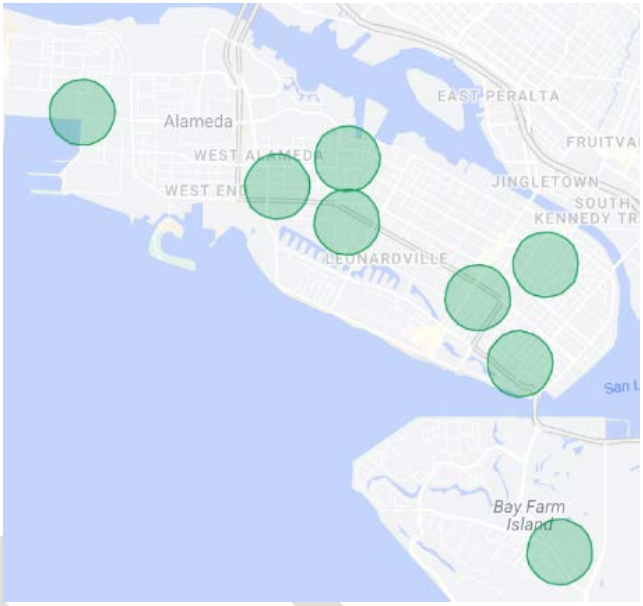


| Priority | Neighborhood | Site Name | Site Address | Justice 40 Area | MUD Hotspot | Preferred Charger Type | Notes |
|---|---|---|---|---|---|---|---|
| **High** | Alameda Point | Seaplane Lagoon Ferry | 1701 Ferry Point Road | Yes | No | L2 | Construction ready. |
| **High** | Park St/Civic Center | Central Ave Lot (Municipal Lot C) | 2312 Central Ave | Yes | Yes | DCFC | Transformer upgrade required for DCFC. |
| **High** | Park St/Civic Center | Civic Center Garage | 1416 Oak St | Yes | Yes | L2 | Permit submitted for L2. Transformer upgrade required for DCFC; no space available. |
| **High** | Central | Mastick Senior Center | 1155 Santa Clara Ave | Yes | No | L2 | Sufficient capacity at nearby transformer; can tap into building electrical panel. |
| **High** | Webster St/West End | West End Lot (Municipal Lot W) | 711 Santa Clara Ave | No | No | DCFC | Transformer upgrade required for DCFC. |
| **High** | Central | Jean Sweeney Park | 1925 Sherman St | Yes | No | DCFC | Transformer upgrade required for DCFC. |
| **High** | Bay Farm Island | HBI Park and Ride | 300 Island Dr | No | No | L2 | Need to determine feasibility of using existing service. |
| **Medium** | Park St/Civic Center | Park Ave Lot (Municipal Lot A) | 1418 Park Ave | No | Yes | DCFC | Transformer upgrade required for DCFC. |
| **Medium** | Webster St/West End | Washington Park | 1333 8th St | No | Yes | DCFC | Transformer upgrade required for DCFC. |
| **Medium** | Bay Farm Island | BFI Library | 3221 Mecartney Rd | No | No | DCFC | Transformer upgrade required for DCFC. |
| **Medium** | East End | Lincoln Park | 1450 High St | No | No | DCFC | Small lot |
| **Medium** | Park St/Civic Center | Main Library | 1515 Oak St | Yes | Yes | DCFC | Small lot |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Medium** | Webster St/West End | Woodstock Park | 351 Cypress St | Yes | Yes | DCFC | Transformer upgrade required for DCFC. |
| **Medium** | Alameda Point | City Hall West | 950 W Mall Square | Yes | No | DCFC or L2 (employee) | On hold until after construction complete in 2024 |
| **Medium** | Alameda Point | Estuary Park | 230 Mosley Ave | Yes | Yes | DCFC | Transformer upgrade required for DCFC. |
| **Medium** | Park St/Civic Center | City Hall | 2263 Santa Clara Ave | Yes | Yes | DCFC | Transformer upgrade required for DCFC. |
| **Low** | Alameda Point | Main St Ferry | 2990 Main St | Yes | No | L2 | Transformer is at capacity. Coordinate with planned WETA upgrades. |
| **Low** | Bay Farm Island | Harbor Bay Ferry | 215 Adelphian Way | No | No | L2 | Transformer is at capacity. Coordinate with planned WETA upgrades. |

## Potential Curbside Charging Sites

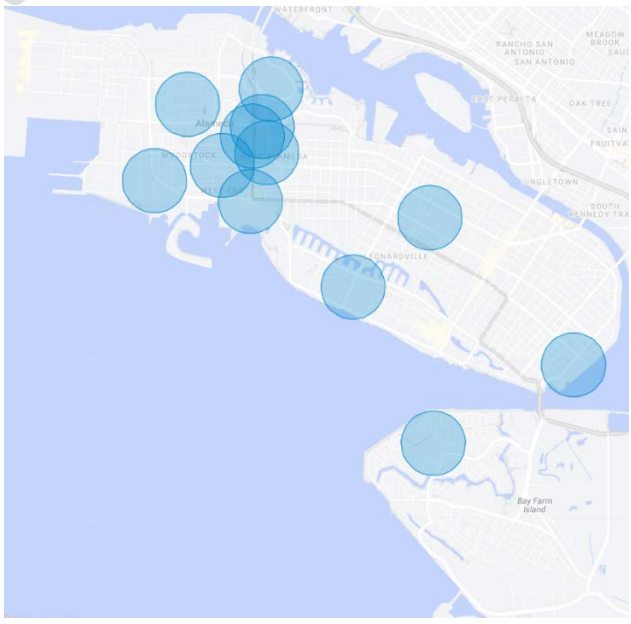
These locations exist near city-owned sites or by schools but lack parking lots and would require on-street, curbside chargers. Charging at these locations would likely require a single Level 2 charger to be attached to a power pole or by utilizing existing infrastructure. Some, but not all, power poles in Alameda run off of 240V and would allow this to be possible for a relatively low cost. Further collaboration with AMP and Public Works would be required to determine feasibility and exact locations of adequate power poles. For sites adjacent to schools, coordination with AUSD would also be required.




| Site Address | Site Name | Justice40 Area | MUD Hotspot | Preferred Charger Type |
|---|---|---|---|---|
| Alameda Waterfront Park | 2151 Ferry Point | Yes | No | L2 |
| Littlejohn Park | 1401 Pacific Ave | Yes | Yes | L2 |
| Chochenyo Park | 2430 Encinal Ave | No | Yes | L2 |
| Godfrey Park | 286 Beach Road | No | No | L2 |
| Maya Lin School | 825 Taylor Ave | No | Yes | L2 |
| Franklin Park | 1432 San Antonio Ave | No | Yes | L2 |
| Edison Elementary | 2700 Buena Vista Ave | No | Yes | L2 |
| Otis Elementary | 3010 Fillmore St | No | Yes | L2 |

## Potential Privately-Owned Sites

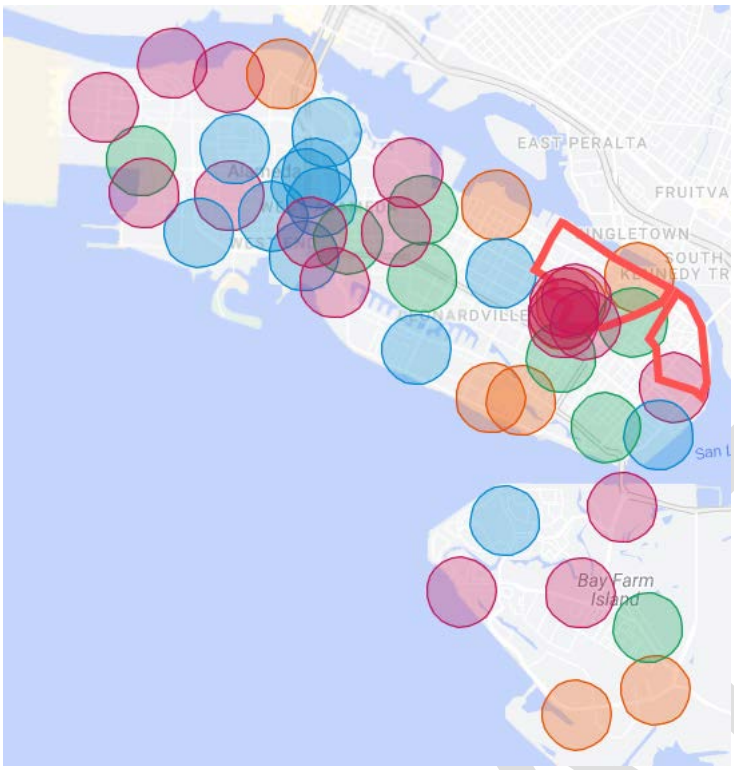
These locations consist of privately-owned locations with off-street parking that may be viable for charger installation and could serve the public, at least during off hours. These sites include schools, churches, and shopping centers. Shopping centers may provide the most feasible route to installation given the natural fit and that lots are publicly available at all hours. Schools and churches may pose complications as they can serve the local neighborhood but may also be used during inappropriate hours. The City has not reached out to any of these locations yet to discuss EV charging options.



| Site Name | Site Address | Justice 40 Area | MUD Hotspot | Charger Type | Notes |
|---|---|---|---|---|---|
| Ruby Bridges Elementary | 351 Jack London Ave | Yes | Yes | L2 | Parking spaces on Dufour Ln |
| Encinal Jr and High | 210 Central Ave | No | Yes | L2 | Off-street lot on Central. ChargePoint charger may already exist here. |
| Island High | 500 Pacific Ave | Yes | Yes | L2 | Large parking lot, may require infrastructure |
| Love Elementary | 2025 Santa Clara Ave | Yes | Yes | L2 | Lot between school and church |
| Will C. Wood Middle | 420 Grand Ave | Yes | Yes | L2 | Lot on south side of school. Might require infrastructure |
| Lincoln Middle | 1250 Fernside Blvd | No | No | L2 | Two parking lots |
| Bay Farm School | 200 Aughinbaugh Way | No | No | L2 | On-site parking lot |
| Webster Sq. Shop. Ctr | 730 Atlantic Ave | Yes | Yes | DCFC | Many potential locations in this center, lots of shopping |
| Peet's Coffee | 1901 Webster St | Yes | Yes | DCFC | Lot to west of Peet's |
| Neptune Plaza Shop. Ctr | 660 Central Ave | No | Yes | DCFC | Many parking spots, lots of shops |
| Grocery Outlet | 730 Buena Vista Ave | Yes | Yes | DCFC | Grocery store, ideal for DCFC |
| Marina Village | 815 Marina Village Pkwy | Yes | Some | DCFC | |

## Potential Charger Coverage

The following map displays all EV charging locations proposed in this document together as well as the AFC acceptable zone. Each charger location has a quarter-mile radius around its exact location to demonstrate the plausibility of accomplishing the City's goal of having a public EV charger within a quarter-mile of all residents.




| Legend |
| --- |
| Existing Public EV Chargers |
| Potential City-Owned Sites |
| Potential Privately-Owned Sites |
| Potential Curbside Sites |
| AFC Acceptable Zone |

## EV Charging Requirements

The following California state requirements will need to be met by the City when installing EV chargers.

**Accessibility:** when a facility has between one and four charging ports, one parking space must be van accessible; when a facility has between five and 25 ports, one parking space must be van accessible with a marked sign and one space must be standard accessible; and, when a facility has between 26 and 50 charging ports, one parking space must be accessible with a marked sign, one space must be standard accessible with a marked sign, and one space must be ambulatory accessible.

**Technical:** EV charging parking spaces must be at least 12 feet wide for van accessible spaces, 9 feet for standard accessible spaces, 10 feet for ambulatory spaces, and 17 feet for drive-up spaces (for charging stations resembling gas station pumps). There must also be an accessible route that allows a wheelchair user access to the charging station and an unobstructed route to the building it serves or sidewalk if no particular building is served by the charger (i.e. a parking garage). A waiver may be applied for if creating the conditions for accessibility would result in an unreasonable hardship for the installer.

**Exceptions:** The two exceptions for these requirements are 1) if the charger serves a private user or users and is not available to the public, and 2) if in public housing, the parking space is assigned to a particular household.

## Funding

The City wishes to incur little to no cost in the planning and implementation of their EV charging network. Funding from federal, state, regional, and local will be vital for the City to reach their EV

charging goals and current grant and rebate opportunities are listed below. The City has also looked into partnerships with third-party organizations for no-cost solutions to get EV chargers installed.

**Charging and Fueling Infrastructure Discretionary Grant (CFI)**

- Federal funds that are within two categories: Community Grants and Corridor Grants
- Community grants are for Level 2 or DCFC chargers. The grant minimum is $500,000 with a maximum of $15,000,000. Funds will cover up to 80% of final project costs.
- Corridor grant requirements are nearly identical to NEVI requirements and must be for DCFC charging. The grant minimum must be $1,000,000 and there is no maximum on funds. A third party must be used and the funds will cover up to 80% of the project.
- The City is currently requesting more information on funding specifics. The deadline to submit for funds is May 30, 2023.

**CALeVIP 1.0**

- State-wide grant program for purchasing and installing Level 2 and DCFC chargers.
- The City applied for funding for 11 sites – three locations have funds reserved, one received an extension for funding, three are on a waitlist, and three had their funding expire.
- This grant program is still open for applications.

**NEVI**

- Federal funding for DCFC chargers located along Alternative Fuel Corridors (Interstate 880). Sites must be within one mile of an eligible corridor entrance or exit.
- Eligible locations in Alameda center around Park Street and three city-owned lots fall under this category: Civic Center Garage, Municipal Lot A, and Central Ave Lot C. Lincoln Park may also be within this area.

**CALeVIP 2.0**

- These funds for pre-planned DC fast charger installations will be available in 2023. Applicants must have already started site verification, permitting and/or utility design process.
- Rebates exclusively for disadvantaged community (DAC) or low-income community (LIC) census tracts.

**Alameda Municipal Power (AMP)**

- Up to $800 for residents to install a Level 2 charger in their home.
- Up to $48,000 for Level 2 chargers at multi-family buildings
- Up to $39,000 for Level 2 Chargers at Commercial businesses and government facilities

**25D Tax Credit**

- May apply for battery-involved charging solutions in residential areas. The credit is 30 percent of the total project cost and is uncapped.

**30C Tax Credit**

- Also referred to as the Alternative Fueling Tax Credit, this initiative provides a 30 percent tax credit for alternative fuel infrastructure, including EV charging, up to $100,000. Residential consumers can receive a tax credit of up to $1,000 for charging infrastructure.
- In order to receive the tax credit, the following criteria must be met: the census tract is not an urban area and the poverty rate for the census tract must be at least 20 percent or in metropolitan and non-metropolitan areas, the census tract must be 80 percent or less of the state's median family income.
- Consultants have told the City that Alameda does not fit the requirements for this funding.

**Low Carbon Fuel Standard Credits (LCFS)**

- LCFS credits can be earned from the California Air Resource Board (CARB) by implementing zero-emission vehicle infrastructure.
- These credits can be sold to other entities on an open market with fluctuating prices.