District's Electric Vehicle Infrastructure Deployment Plan

d • Weare GOVERNMENT OF THE DISTRICT OF COLUMBIA DC MURIEL BOWSER, MAYOR

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INTRODUCTION

The District Department of Transportation (DDOT) was established by the District Department of Transportation Establishment Act of 2002 as a cabinet-level agency responsible for the management of transportation infrastructure and operations in Washington, DC (the District). DDOT staff ensures that the District's roads are safe, reliable, and easy to navigate for the millions of residents, commuters, and visitors who use the transportation network. DDOT's mission is to equitably deliver a safe, sustainable, and reliable multimodal transportation network for all residents and visitors of the District of Columbia. As a city, the District is unique because it also functions as a state which is now faced with the challenges and opportunities of deploying electric vehicle (EV) charging stations. Serving local and regional travel needs will be important for supporting the broad adoption of EVs among District residents and visitors.

The District's NEVI Deployment Plan: DDOT has developed the District National Electric Vehicle Infrastructure (NEVI) Deployment Plan to outline strategies for using funds from the NEVI Formula Program, established by the Bipartisan Infrastructure Law (BIL), to shape the District's EV infrastructure framework and interconnect with a nationwide EV charging network along Interstate corridors and other parts of the National Highway System (NHS). This plan will be updated regularly as technology changes, lessons are learned from deployment, and



as utilization data is gathered. The project website will also be updated quarterly, with information for both the public and partners for installing, operating, and maintaining chargers.

Under the NEVI Formula Program, the District is to receive \$16,679,459 in funding over the next five years, with \$2.4 million in 2022, to invest in electric vehicle supply equipment (EVSE) and build direct current fast charging (DCFC) stations throughout the District in accordance with the program's guidance, EVSE standards and specifications, and requirements in proposed rules.

The District currently has two existing US Department of Transportation (US DOT) Federal Highway Administration (FHWA) designated EV Alternative Fuel Corridors (AFCs), which are designated corridor-ready and three AFCs that were recently designated corridor-pending. DDOT will follow NEVI Formula guidance and rules to prioritize building DCFC stations within one mile of "corridor-pending" AFCs throughout year one of the program. Interstates are the highest



priority, followed by NHS roadways, followed by local roads. Once these corridors have been certified "fully builtout" by US DOT, DDOT will identify other corridors to implement the District's EV charging priorities in accordance with the NEVI Formula Program. DDOT will administer NEVI Formula Program funds through an equitable contracting and procurement process designed to award public and private site hosts funding to install, operate, and maintain compliant EVSE charging stations and create a convenient, reliable, affordable, and equitable charging experience for all users.

Electrification and the District's Sustainability Goals: Sustainability is a top priority for the District and the NEVI Formula Program complements many existing District sustainability goals and initiatives look to electrification to reduce greenhouse gas (GHG) emissions in the District, as the city seeks to be carbon neutral and climate resilient by 2050.

- moveDC: The District has developed several plans that align to promote sustainability and equity in transportation. The District's long-range transportation plan <u>moveDC</u> has seven goals including Equity and Sustainability, highlighting the importance of these two elements in guiding transportation investments. Policy "P" calls for reduction of GHG from transportation by 60 percent by 2032 and Strategy 34 calls for supporting EV use with more charging facilities. Deployment of the NEVI Formula Program will directly support this policy.
- Sustainable DC 2.0: The Sustainable DC 2.0 Plan lays out strategies and target dates for making the District healthy, sustainable, and equitable; the Transportation Category calls for reducing GHG emissions from the transportation sector by 60 percent. Strategies include encouraging a network of EV charging stations and fully electrifying District-controlled buses.
- Clean Energy DC: The <u>Clean Energy DC plan</u> lays out actions for reducing districtwide emissions, including in transportation, with a goal to reduce emissions by 56 percent by 2032 from a 2006 baseline.
- Transportation Electrification Roadmap (TER): This document is still being finalized, but so far the District has hosted eight stakeholder engagement sessions to inform the TER. The roadmap will outline actions needed to equitably electrify transportation and forms the basis of this NEVI Deployment Plan.
- DOOT Sustainability Plan: The plan calls for protecting the environment and conserving natural resources, with a goal to reduce air pollution. It also calls for climate change adaptation partly through "increasing refueling and recharging equipment and infrastructure to encourage the use of alternative fuels and advanced vehicles."
- CleanEnergy DC Omnibus Amendment Act of 2018 (DC Law 22-257): With passage of the <u>Clean Energy</u> <u>Omnibus Amendment Act of 2018</u>, the District has codified key initiatives within Clean Energy DC including transportation electrification. The law mandates that at least 25 percent of private vehicles registered in the District must be zero-emission by 2030. Additionally, the law requires that 50 percent of public buses, fleets, and private fleets of more than 50 vehicles be zero-emission by 2030 and 100 percent zero-emission by 2045. Also included in the law are incentives for developing EV charging infrastructure and authorization for the Public Service Commission to support utility-provided infrastructure installation. Through this law, the District has set aggressive targets for transportation electrification.
- Electric Vehicle Public Infrastructure Expansion Amendment Act of 2018 (<u>DC Law 22-78</u>): This law mandates DDOT to install at least 15 EV charging stations that are publicly accessible, including at least one EV charging station in each Ward.
- Electric Vehicle Readiness Amendment Act of 2020 (DC Law 23-194): In addition, the District passed the <u>Electric Vehicle Readiness Amendment Act of 2020</u> that requires new construction or substantial improvement of commercial or multifamily buildings with three or more off-street parking spaces to include EV make-ready infrastructure for at least 20 percent of total parking spaces. The law also requires DOEE to establish incentives for property owners to install such infrastructure for a greater percentage of spaces.



Collaborative Approach: To develop this plan and accomplish these important milestones, DDOT has worked and continues to work with partner agencies and the electric utility, including:

- ~ Department of Energy and Environment (DOEE)
- Department of For-Hire Vehicles (DFHV)
- Department of General Services (DGS)
- Department of Public Works (DPW)
- ~ Office of the Deputy Mayor for Operations and Infrastructure (DMOI)
- Potomac Electric Power Company (PEPCO)

DATES OF STATE PLAN FOR ELECTRIC VEHICLE INFRASTRUCTURE DEPLOYMENT DEVELOPMENT AND ADOPTION

While the first round of funding from the NEVI Formula Program is available in FY 2022, DDOT spent most of FY 2022 coordinating with agencies and stakeholders, identifying and nominating new AFCs, and developing the District NEVI Deployment Plan. Once approved by FHWA, DDOT will adopt the plan and start implementation in FY 2023, the second year of the NEVI Formula Program. Generally, the dates of DDOT's 5-year plan for implementing the NEVI Formula Program are listed in Table 1 and Figure 2. More detail is provided for FY 2023, by quarter, because DDOT expects to complete implementation of charging stations on existing and recently designated AFCs and be certified "fully built out" by the end of FY 2023. DDOT will install charging stations beyond current AFCs in 2024, continuing through 2026. DDOT will monitor and evaluate the program after each year of installation.

Table 1. Implementation activities.

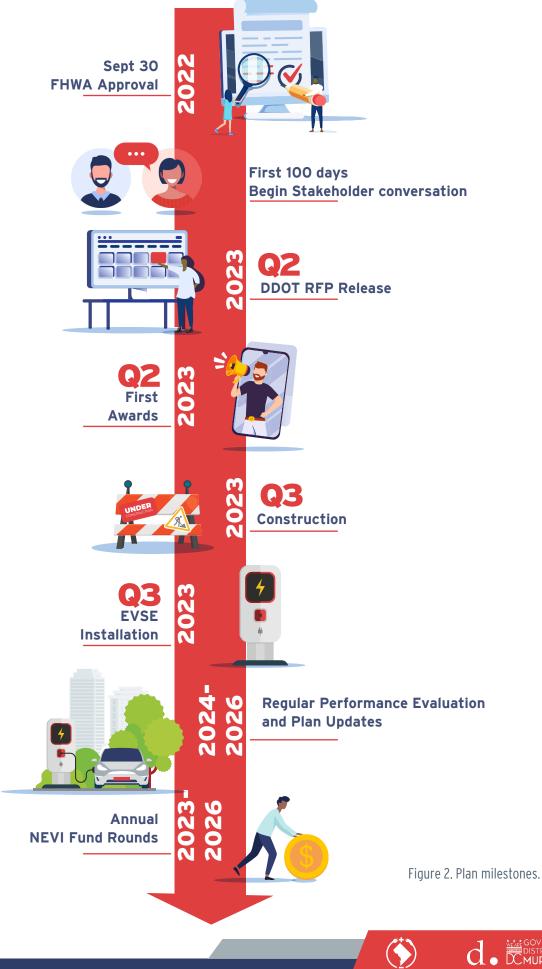
PERIOD	ACTIVITIES	
	FHWA released NEVI Guidance	
	 DDOT and District agency partners convened the Transportation Electrification Working Group (TEWG) 	
	Coordination between other stakeholders	
February - September 2022	Developed the District NEVI website	
	 Nominated three new AFCs, which FHWA formally designated as "corridor-pending" 	
	 Submitted Draft NEVI Deployment Plan 	
	 Submitted Final NEVI Deployment Plan to FHWA no later August 1 	
	 FHWA approve the District's NEVI Deployment Plan by September 30 	
	 Finalize plans for funds administration with FHWA 	
First 100 Davis of EV2022	 Finalize contracting mechanism and draft request for proposal (RFP) 	
First 100 Days of FY2023	 Begin Public Outreach and Engagement 	
	 Detail plans for AFC to be fully built out 	



Table 1. Implementation activities.

PERIOD	ACTIVITIES	
	• Release Final RFP at the start of Q2 of FY 2023 for 30-days	
Q2 of FY 2023: January - March 2023	Review proposal and select contractor	
	Announce contracts awards	
	Environmental Review	
	Begin annual update of NEVI Deployment Plan for next fiscal year	
	Construction and installation begin	
Q3 of FY 2023: April - June 2023	 Identify and nominate second priority AFCs 	
	 Finalize annual update of NEVI Deployment Plan for FY 2024 	
Q4 of FY 2023: July - September 2023	Construction and installation ends	
	 Request FHWA certify AFCs as "fully built out" 	
	Nominate AFCs as needed	
	Identify projects	
	Environmental reviews	
Annually, Years Three to Five: FY 2024 to FY 2026	Release RFP and award contracts	
	 Monitor program implementation progress 	
	• Evaluate program and plan	
	 Annual update of NEVI Deployment Plan for next fiscal year 	
	Public Outreach and Engagement	
Ongoing: FY 2023 and Beyond	 Identifying EV-related training and educational opportunities that will boost the District's workforce to support EV adoption 	
	 Agency and stakeholder coordination through the TEWG 	
	• Website update	





STATE AGENCY COORDINATION

DDOT has actively engaged with key District agencies to coordinate around the development of this plan and the District's electrification program. A Transportation Electrification Working Group (TEWG) has been formed to focus on the District sustainability planning and electrification initiatives. The goal of the TEWG is to accelerate the District's progress towards vehicle electrification and charger installation; identify synergies and shared resources opportunities, and align budget request; and identify key rulemaking and policy needs. TEWG includes representatives from DDOT, DOEE, DFHV, DMOI, DPW, and DGS. Organizations and points of contact are included in Table 2.

Table 2. District agency coordination.

ORGANIZATION	POINT OF CONTACT	TITLE	
	Matthew Gaskin	• Air Quality Coordinator	
	Austina Casey	• Manager, Environmental Program Branch	
	Lezlie Rupert	• Manager, State and Regional Planning	
DDOT	Anna Chamberlin	 Associate Director, Planning and Sustainability Division 	
	Carla Longshore	 Associate Director, Transit Delivery Division 	
	Eric Campbell	 Manager, State Energy Program 	
DOEE	Neha Bhatt	Senior Policy Advisor	
	Alexandra Fisher	 Energy Policy Advisor 	
DFHV	Wendy Klancher	Senior Policy Advisor	
DGS	Tiwana Hicks	 Associate Director, Portfolio Management Division 	
	Rashad Jenkins	Realty Officer	
DMOI	Alan Propp	Senior Policy Advisor	
DPW	Richard Morris	DPW, Vehicle Control Officer	
Dr W	Jason Nordt	 DPW, Fleet Management Administer 	

PUBLIC ENGAGEMENT

STAKEHOLDERS INVOLVED IN PLAN DEVELOPMENT

Nearly 30 coordination meetings have been held with internal District and external stakeholders to initiate this plan and coordinate on the District's goals and approach to implementing the electrification program. Strong coordination is demonstrated by two biweekly standing meetings held between DDOT, DOEE, and DMOI regarding the Bipartisan Infrastructure Law (BIL) and separately about the NEVI Formula Program. The full list of meetings is shown in Table 3. As part of the coordination meetings, DDOT has begun to identify roles for stakeholders as shown in Table 4.



DATE	ТОРІС	PARTICIPATING ORGANIZATION	
2/23/2022	Nominations for AFC round six	DDOT, DOEE	
2/24/2022	Review of nominations	DDOT	
3/3/2022	NEVI roles and responsibilities	DDOT	
3/4/2022	EV impacts on for-hire fleets	DDOT, DFHV	
3/4/2022	Performance evaluation	OBPM ¹ , DDOT, DMOI	
3/7/2022	AFC nominations	DDOT, GWRCCC ²	
3/10/2022	Technical assistance	DDOT, Joint Office ³	
3/11/2022	Biweekly BIL coordination	DDOT, DOEE, DMOI	
3/21/2022	Transportation Electrification Roadmap discussion	DDOT, DOEE, DMOI	
3/25/2022	Information gathering	DDOT, Electrify America	
4/7/2022	Biweekly BIL coordination	DDOT, DOEE, DMOI	
4/8/2022	Update on NEVI Deployment Plan development	DDOT, DOEE, DMOI	
4/12/2022	Consultant coordination	DDOT, Consultant	
4/12/2022	Acquisition of Exxon property	DDOT, DGS	
4/14/2022	Update on NEVI Deployment Plan development	DDOT, DOEE, DMOI	
4/14/2022	Update on NEVI Deployment Plan development	DDOT, DOEE, DMOI	
4/22/2022	EV contracting	DDOT	
4/26/2022	Transportation Electrification Working Group	DDOT, DOEE, DMOI, DPW, DGS	
4/28/2022	Update on NEVI Deployment Plan development	DDOT, DOEE, DMOI	
5/3/2022	AFC nominations	DDOT, GWRCCC	
5/3/2022	Update on NEVI Deployment Plan development	DDOT, DOEE, DMOI	
5/5/2022	Biweekly BIL coordination	DDOT, DOEE, DMOI	
5/10/2022	MWAQC TAC ⁴ coordination	DDOT, VDOT ⁵ , MDOT ⁶ , MWCOG ⁷	
5/11/2022	Update on NEVI Deployment Plan development	DDOT, DOEE, DMOI	
5/12/2022	PEPCO coordination	DDOT, DOEE, DMOI, PEPCO	
5/20/2022	Coordination with Joint Office Region 3 and 4	DDOT, Joint Office	
5/24/2022	Transportation Electrification Working Group	DDOT, DOEE, DMOI, DPW, DGS	
6/2/2022	Biweekly BIL coordination	DDOT, DOEE, DMOI	
6/3/2022	Coordination with Joint Office Region 3	DDOT, Joint Office	

¹ 2 3 4 5 6 7

Office of Budget and Performance Management Greater Washington Region Clean Cities Coalition Joint Office of Energy and Transportation Metropolitan Washington Air Quality Committee Technical Advisory Committee Virginia Department of Transportation Maryland Department of Transportation Metropolitan Washington Council of Governments

Table 4. Agency and stakeholder roles related to the NEVI Formula Program.

AGENCY	NEVI ROLES		
District Department of Transportation (DDOT)	DDOT will lead planning, contracting, ROW procurement, NEPA, and project reporting. In addition, DDOT will ensure funds are distributed equitably and meet Justice40 requirements.		
Department of Energy & Environment (DOEE)	E) DOEE will lead coordination with DDOT, utilities, and other agencies. DOEE will work with DDOT and PEPCO to develop RFPs for EVSE installation and incentives for implementation.		
Department of For-Hire Vehicles (DFHV)	DFHV will provide the taxi, limousine, and transportation network company (TNC) perspective to infrastructure planning discussions.		
Department of General Services (DGS)	DGS operates and maintains several buildings which might host EV charging stations. DGS will work closely with DDOT to identify suitable locations and requirements for EV stations.		
Department of Public Works (DPW) Department of Public Works (DPW) Provides several municipal services to District residents. DPW is responsible enforcement and snow removal, which are critical for maintaining the availability charging stations. DPW will develop policies to ensure access to chargers.			
Office of the Deputy Mayor for Operations and Infrastructure (DMOI)	Provided initial introduction to PEPCO staff to advance coordination efforts and participate in biweekly meetings.		
Office of Contracting and Procurement (OCP)	OCP provides procurement services for both hardware and services for DDOT. OCP will play an integral part in procuring and/or granting funds for third-party EV charging station installation services. DDOT works closely with OCP to understand and determine the right method for deploying EV chargers.		
Potomac Electric Power Company (PEPCO)	PEPCO is the utility provider in the District and will provide power to EV charging equipment. "The Electric Company has a critical role to play in partnership with the District in achieving the climate goals related to transportation. This will include: decarbonizing the electricity supply; streamlining Electric Vehicle Supply Equipment (EVSE) interconnection in a way that is transparent, optimizes the use of existing assets, and prioritizes NWAs; encouraging beneficial charging behavior through dynamic pricing, other market signals, and managed charging programs; and using EVs as grid assets." (Reference: Formal Case No. 1167 - In the Matter of the Implementation of Electric and Natural Gas Climate Change Proposal, June 17, 2022)		
Metropolitan Washington Council of Governments (MWCOG) MWCOG enables coordination and information sharing between VA, MD, and DC of will enable all three agencies to develop standards over time.			
Greater Washington Region Clean Cities Coalition (GWRCCC)	GWRCCC works closely with various public and private stakeholders to accelerate the EV transition.		
National Park Service (NPS)	If charging stations are located near NPS ROW, permits may be required. DDOT will proactively coordinate in such cases.		

PUBLIC OUTREACH

Public engagement is key to successfully implementing the NEVI Formula Program. DDOT is developing a multipronged approach to meaningfully involve the public. Outreach will be conducted in compliance with Federal laws and District statutes such as the Language Access Act of 2004 and coordinated through DDOT's <u>Transportation Equity and Inclusion Division</u> to ensure participation from a diverse cross-section of the District's residents. Virtual and in-person events will be held to cater to the varying needs of different groups. The process for public outreach is outlined below. Throughout all phases, the <u>project website</u>, social media accounts, and other means will be used to communicate with the public. DDOT will publish on these platforms any annual reports required to be submitted to US DOT as detailed in the NEVI Program Notice of Proposed Rulemaking (NPRM)



§680.112 sub-section D. The project website will also be used to interact with the public, using methods including online surveys, public comment page, events calendar, interactive maps, factsheets, presentation materials, and other resources.

Phase 1: During Planning

DDOT will work with internal and external stakeholders to seek feedback and incorporate it into a public involvement plan. Public meetings will include a presentation customized to the group participating in each event, followed by the opportunity for residents to provide input on the following:

- ~ New charging station locations
- ~ Upgrade eligible locations
- ~ Criteria for funding station locations
- ~ Methods to ensure benefits of the program accrue to Justice40 populations
- ~ Priorities for the program after AFCs are complete and certified fully built out
- ~ Education and training needs
- ~ Expected utility charges
- ~ Community charging needs

DDOT will engage the following groups to ensure robust participation:

- Advisory Neighborhood Commissions (ANCs)
- Citizen associations
- ~ Business Improvement Districts (BIDs)
- Advisory councils
- Main Street organizations
- ~ General public
- ~ Higher education institutions
- ~ Electrician and EV technician certification organizations
- ~ Federal government

Phase 2: During Grant Application Periods/Contracting and Bidding

Based on input received during Phase 1, DDOT will organize several educational seminars for the general public to provide an understanding of what station location criteria were selected and where/when locations will be constructed. As much as possible, a timeline for procurement and implementation will be updated and shared with the public. DDOT will use the project website to provide information on upcoming procurement opportunities, project status, and selected locations, as well as seek to provide procurement process transparency to the general public in compliance with NPRM §680.106 sub-section A.

Phase 3: After Construction

Once charging stations are installed, DDOT will conduct outreach to understand the customer experience. It will be critical to take lessons learned from end-users to improve future implementation, both in terms of charger interfaces and ease of use but also related to operations and maintenance issues. DDOT will provide information about EV charger usage and benefits to date in compliance with NPRM §680.112 sub-sections B-C.



PLAN VISION AND GOALS

Through the public and stakeholder engagement described above, the following vision and goals were developed for the implementation of the District's NEVI Formula Program and the District has taken several steps to prepare for vehicle electrification.

VISION

The vision of the District NEVI Deployment Plan is to build a robust, reliable, and interconnected charging network, across all eight District Wards to promote EV adoption, using an equitable process and thorough community engagement.

GOALS

Goals and related strategies for the program are shown in Table 5. Strategies in bold are outcome-oriented and time-constrained.

Table 5. Goals and strategies.

AGENCY	NEVI ROLES	
A reliable, NEVI-compliant direct current	1. By 2024, install DCFCs or upgrade existing EVSE to NEVI-compliant standards along 100 percent of AFCs, currently in the District.	
fast charging (DCFC) station network on the District's AFCs	2. By 2027, install or upgrade DCFCs to NEVI-compliant standards along additional AFCs, identified after current AFCs are fully built-out, to facilitate regional and long-distance travel.	
	1. Engage with representatives and community members in each District ward to equitably implement charging to serve community needs.	
Robust stakeholder and public engagement,	2. Coordinate with Maryland and Virginia to maximize impact and implement EVSE efficiently across District and state borders.	
identification of additional regional priorities, and use of remaining NEVI	3. Engage with third-party EVSE owners around operations and maintenance.	
Formula funds on additional District Priorities	4. Identify and fund fleet-serving charging locations, that are also publicly accessible, to support transit, taxi, TNC, and freight electrification with any remaining NEVI funds after they are certified fully built out.	
	5. Ensure robust regional stakeholder engagement to inform annual NEVI Deployment Plan updates.	
	1. Develop and implement data sharing and reporting requirements.	
Regular and effective performance evaluation of NEVI Formula Program	2. Analyze charger data and compile lessons learned to apply to subsequent NEVI Formula Program efforts.	
implementation	3. Coordinate with other states on lessons learned both directly and through groups like The Eastern Transportation Coalition.	

CONTRACTING

FHWA released guidance on February 10, 2022, and a Notice of Proposed Rulemaking on June 8, 2022, making clear that the agency seeks to capitalize on public and private funds to aggressively implement a nationwide EV charging network. Under NEVI Formula Program funding, the District expects to receive a total of \$16,679,459 over five years, including \$2,468,807 in FY 2022.



Activities undertaken with NEVI Formula funds must comply with both Federal and District laws. Below is a list of key federal laws and regulations that the District will comply with during contracting for direct current fast charger (DCFC) station installation:

- ~ Clean Air Act
- ~ National Environmental Policy Act (NEPA)
- ~ Uniform Relocation Assistance and Real Property Acquisition Policies Act
- ~ Title 23, Chapter 1 of the Code of Federal Regulations (CFR)
- ~ Federal Acquisition Regulations
- ~ Build America
- ~ Buy America
- Metropolitan Planning Organization (MPO) Regulations
- ~ State Transportation Improvement Program (STIP) Regulations
- US DOT Final NEVI Program Rules (currently available as a Notice of Proposed Rulemaking)
- ~ Procurement Practices Reform Act of 2010
- DC Official Code (Title II)
- ~ 27 DFCMR (1988) DC Municipal Regulations and DC Register

METHOD

DDOT intends to achieve its vision of a robust, reliant, and interconnected charging network by contracting with third-party EVSE partners who will install, operate, and maintain NEVI Formula program-compliant EVSE charging stations. This could take different forms, including a competitive grant program or a public-private partnership. Regardless of the method, it will be critical to ensure effective operations and maintenance of facilities. All contracts will include full NEVI Formula Program compliance and data-sharing requirements. Equity in contracting is also critical. DDOT has implemented an online DBE Certification System to make it easier for disadvantaged businesses to do business with the agency. DBE goals are set according to <u>FHWA-compliant policies</u> and will be applied to the NEVI Formula Program. The sections below are designed to discuss the merits of these various procurement program options.

Competitive Grant Program

Applicants could request funding for a single facility or a bundle of facilities, depending on location and potential economies of scale for installation, as well as factors such as efficient administration of grants by DDOT. Applications would be evaluated using a set of criteria; potential criteria may include but are not limited to the information shown in Table 6. Final criteria will be developed based on the final adopted US DOT FHWA NEVI Formula Program Rulemaking and DDOT agency decisions designed to ensure federal compliance and meet the District's goals.

CATEGORY	CRITERIA
	Available Amenities (safety, lighting, restrooms, retail, etc.)
Site Prioritization Factors	Average Annual Daily Traffic (AADT)
	Distance from Other Charging Stations
	Power Supply Readiness
	Economic Development Potential

Table 6. Preliminary criteria for application evaluation.



CATEGORY	CRITERIA	
Tite Deadings	Available Utility Power	
Site Readiness	Shovel-Readiness	
Cost-Effectiveness	Match Provided Above Minimum	

Table 6. Preliminary criteria for application evaluation.

DDOT would publish minimum requirements for receiving a grant in accordance with NEVI Formula Program standards and specifications. Applicants would be required to submit site locations, preparation work completed in advance, and availability of match funding in addition to information demonstrating the selected evaluation criteria. Applicants will also be required to provide a schedule for delivering the EV charging infrastructure to the District in a manner that will lead to efficient and effective deployment, in accordance with the NEVI Deployment Plan. DDOT has experience managing such grant programs; however, some challenges with this type of contracting vehicle includes the agency's lack of control after grant award, additional burden of yearly compliance by an awarded party. Methods to overcome such challenges could include, establishing a legal agreement with grantees to follow NEVI Formula Program requirements, standards, and specifications. The burden of compliance reporting will be placed on grantees and termination and full repayment of funds will be imposed if requirements are not met.

Public-Private Partnership

A formal Public-Private Partnership (P3) approach would capitalize on the private sector's expertise in implementing EVSE. This may be particularly effective in locations that garner less attention from the market and can be used to ensure geographic equity in charging facility access. It would include a cost-sharing mechanism to construct and maintain the facility, possibly on a Build-Operate-Maintain (BOM) model. However, this approach does require additional procurement time that can slow implementation. DDOT will work with the District's Office of Public-Private Partnerships (OP3) to ensure compliance with the proper guidelines and procedures.

IMPLEMENTATION TRANSPARENCY

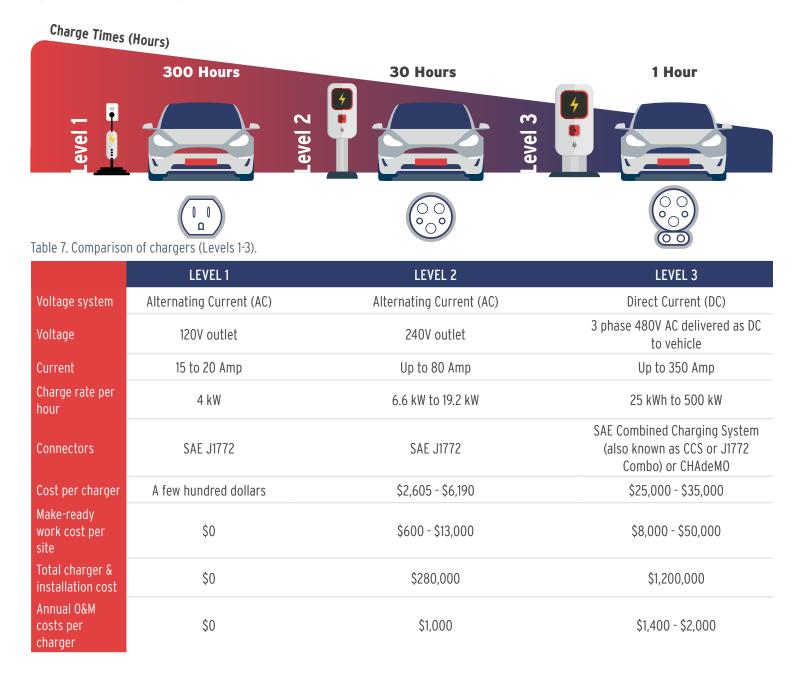
With such a significant investment of public funding, it will be critical to track and evaluate spending to ensure money is being used most effectively. To provide transparency, DDOT will use the project's publicly accessible website to show:

- ~ Ongoing procurements
- ~ Upcoming procurements
- ~ Dashboard of past, current, and future projects
- ~ Map of facility locations and status
- Additional information as outlined in NPRM §680.106 sub-section A

EXISTING AND FUTURE CONDITIONS ANALYSIS

INDUSTRY/MARKET CONDITIONS

Electric vehicle charging is fundamentally different than refueling conventional gasoline or diesel vehicles because electricity is supplied to homes and businesses, enabling charging at many more locations. EV chargers are categorized into three basic types, generally corresponding to levels or rates of charge or energy dispensed in kilowatts (kW) over time (hours) for a total measured in kilowatts per hour (kWh). Table 7 and Figure 3 compares available charging technologies from currently available EVSE. Figure 3. Comparison of chargers.



Level 1 chargers use standard 12OV AC outlets that are usually installed in residences and used for overnight charging due to the slow charging rate. Currently, there are only four Level 1 public charging stations in the District. Level 2 chargers have been available for about a decade and have steadily increased in number since. On the other hand, public DCFC stations have been rolled out more slowly, but have grown rapidly in recent years. The number of DCFC ports increased by 24 percent nationally in 2021. Typically, Level 2 chargers grew at a faster rate than the DCFC because no special upgrades to utility equipment or utility power service are required. Compared to passenger or light-duty vehicles, heavy-duty, transit, and freight vehicle electrification will



require charging locations that consume more energy, need more electrical infrastructure, and larger areas to accommodate larger size commercial vehicles.

The US energy landscape is drastically shifting towards electric fuel. As Figure 4 shows, there has been significant growth in electric charging stations starting in 2012, and since then, there has been exponential growth. While Tesla, Electrify America, EVgo, and ChargePoint are responsible for the majority of existing charging networks, the US Department of Energy (USDOE) and multiple independent market reports conclude that the wider automotive industry is committed to electrified mobility. Numerous manufacturers, including Ford, GM, Chrysler, and Nissan have invested billions in US and foreign EV manufacturing facilities, and these investments are projected to continue to scale up throughout this decade. Charging station vendors are building fast to keep up with projected growth in EVs.

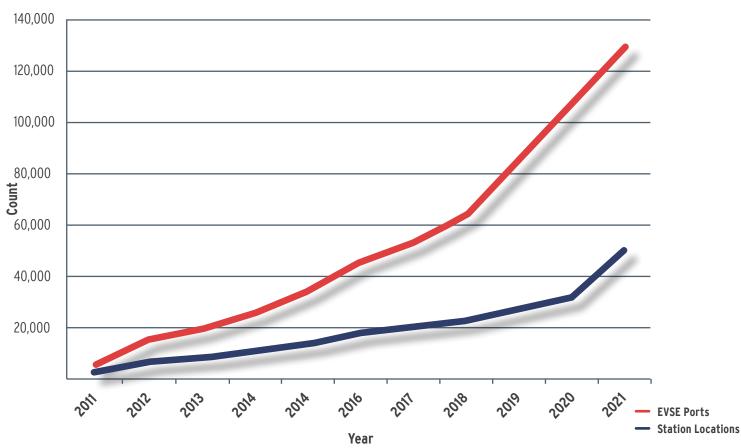
U.S. Public and Private Alternative Fueling Stations by Fuel Type 70,000 60,000 50,000 Number of Stations Biodiesel** 40,000 CNG Electric* Ethanol (E85) 30,000 Hydrogen LNG Methanol (M85) 20,000 Propane 10.000 2012 2010 2014 2026 2018 2020 2006 2008 Year afdc.energy.gov/data

Figure 4. Public and private alternative fueling stations by fuel type.

While the number of charging stations are steadily increasing every year, the number of ports per charging station are increasing faster (Figure 5). This has been supported by the <u>Biden-Harris administration's</u> rollout of significant measures to encourage the charging station manufacturing base in the US, strengthen critical supply chains, reduce costs, and position US workers to participate in transportation electrification industry. The administration set an ambitious goal for EVs to comprise 50 percent of total car sales by 2030.



Figure 5. Public and private EV charging infrastructure.



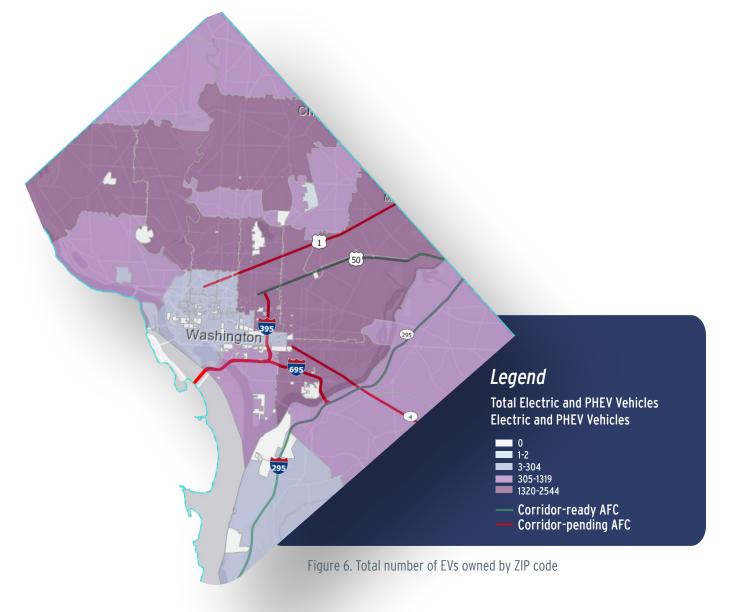
U.S. PUBLIC AND PRIVATE ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

Aligned with national goals, the District is committed to transportation electrification. The District has developed several plans that align to promote sustainability and equity in transportation. The District's long-range transportation plan <u>moveDC</u> has seven goals including Equity and Sustainability, highlighting the importance of these two elements in guiding transportation investments. The <u>Sustainable DC 2.0 Plan</u> lays out strategies and target dates for making the city healthy, sustainable, and equitable; the Transportation Category calls for reducing emissions from transportation that contributes 21 percent of total city GHG emissions. DC's <u>Clean</u> <u>Energy DC</u> plan lays out actions for reducing emissions citywide, including in transportation, with a goal to reduce emissions by 56 percent by 2032 from the 2006 baseline. The greatest benefit–and movement towards achieving the mode shift goals and emissions reduction targets above–from transportation electrification will come by electrifying buses, but private vehicle electrification is critical. Benefits also include co-location of Capital Bikeshare electric bicycle docking stations near DCFC stations to capitalize on grid improvements.

With the passage of the <u>Clean Energy Omnibus Amendment Act of 2018</u>, the District has codified key initiatives within Clean Energy DC, including transportation electrification. The law mandates that 100 percent of public buses, fleets, and private fleets of more than 50 vehicles be zero-emission by 2045 and 50 percent zero-emission by 2030. Also included are incentives for developing electric vehicle charging infrastructure and authorization for the Public Service Commission to support utility-provided infrastructure installation. At least 25 percent of private vehicles in the District must be zero-emission by 2030. Through this law, the District has set aggressive targets for transportation electrification.



EV ownership in the District is growing, but lower than other regional metro averages, due to the District's lower overall vehicle registration rate than in neighboring states. In addition, the District is highly urbanized, with high rates of walking, biking, and public transit use. According to Clean Energy DC, 37 percent of the District's households do not own a vehicle, about twice the national average. Regardless, according to DOEE's Transportation Electrification Roadmap, EV sales/registrations jumped from 0.75 percent in 2016 to 5.51 percent in 2020. Ownership rates by ZIP code are shown in Figure 6. Tesla, Chevrolet, and Ford are the most common manufacturers of electric cars registered in the District.



In 2019, the Sustainable DC 2.0 Plan set a goal to encourage a network of EV charging stations throughout the city, acknowledging limitations imposed by infrastructure. The plan called for partnering with the private sector, PEPCO, and other relevant entities to facilitate the development of convenient and publicly accessible EV charging stations. A few years later, in 2021, the moveDC multimodal long-range transportation plan laid out strategies to support EVs with more charging facilities and encourage developers to construct charging stations. Both plans paved the way for the DOEE's recently published Transportation Electrification Roadmap. The Clean Energy DC



plan issued by DOEE includes a number of actions in developing electric vehicle charging infrastructure, with particular emphasis on public charging stations.

UTILITY INFRASTRUCTURE AND GRID MODERNIZATION NEEDS

PEPCO, an Exelon Corporation subsidiary, is the District's electricity utility. The role of the electric utility with respect to vehicle electrification includes decarbonizing the electricity supply; streamlining EVSE interconnection in a way that is transparent, optimizes the use of existing assets, and prioritizes non-wires alternatives to traditional grid investment; encouraging beneficial charging behavior through dynamic pricing, other market signals, and managed charging programs; and using EVs as grid assets. Grid modernization is critical for fast, transparent interconnection and for allowing EVs to serve as grid assets.

PEPCO has been approved to provide certain transportation electrification offerings by the DC Public Service Commission. Via the Public Charging Make Ready Program, PEPCO will provide "make-ready" infrastructure for 55 public EV charging stations (35 Smart Level 2 and 20 DCFCs) citywide. A formal definition of what is covered by "make-ready" infrastructure is pending before the DC Public Service Commission. Public/private partners will install and own the charging stations.

Energy demand varies based on whether EVs charge at home, work, or commercial locations. The District's electric grid is underutilized during off-peak hours, and PEPCO offers special rate adjustments to encourage off-peak energy consumption while considering seasonal power demand peaks. Well-designed rates and incentives will be important for shifting EV charging to off-peak hours for users to take advantage of lower rates.

STATE GEOGRAPHY, TERRAIN, CLIMATE AND LAND USE PATTERNS

Geography: The District covers approximately 70 square miles, with two major rivers running through it: the Potomac and Anacostia Rivers. The highest point in the District is a little over 400 ft above sea level; close to 2500 acres of land (or five percent of the District) is less than 10 feet above sea level, which is highly susceptible to flooding due to climate change-induced sea-level rise⁸.

Climate: The climate in the District is subtropical, with four distinct seasons. However, average annual temperatures have increased by two degrees Fahrenheit during the last 50 years. Extreme weather events are also rising, with heat emergency days projected to increase 50 percent in the next 30 years. The District is also vulnerable to hurricanes and storm surges. The District has developed the <u>DDOT Climate Change Adaptation</u> <u>Plan</u>, Climate Ready DC and Clean Energy DC plans to outline strategies to deal with climate change and adapt for a sustainable future. The strategies in these plans include reducing GHG emissions, improving the resilience of infrastructure, increasing renewable energy, and EV adoption.

Land Use: During the last decade, the US Census indicates the District has experienced population growth of 14.6 percent, and over the next 25 years, it is expected to add 250,000 residents, a 35 percent increase⁹. Land use in the District comprises high density development in the core and along major arterials, open spaces in the core (national mall) and along the Potomac and Anacostia Rivers, and low and moderate density residential areas in outer areas. This density of land use is supported by a robust multi-modal transportation network which consists of freeways, arterials, heavy rail and bus public transit, trails, and bike lanes.



During the last decade, the US Census indicates the District has experienced population growth of 14.6 percent and over the next 25 years it is expected to add 250,000 residents, a 35 percent increase. Historically, not all wards in the District have experienced the same economic development. The District has developed policies and strategies to address this disparity to ensure Disadvantaged Communities (DACs) in all wards benefit from the District's initiatives and investments. A transportation network that supports future land use and provides connectivity to these communities will support the

District's goal of sustainability. The AFCs supported by the NEVI Formula Program are well aligned with this goal.

STATE TRAVEL PATTERNS, PUBLIC TRANSPORTATION NEEDS, FREIGHT AND OTHER SUPPLY CHAIN NEEDS

Travel Patterns: DDOT maintains over 1400 miles of roadways in the District which serve not only District residents, but also commuters and visitors from neighboring states. The I-95 corridor, along with I-295, I-395, I-695 and I-495, serve District residents and businesses and play a vital role in the District's and nation's economy. Understanding the challenges of growing transportation needs, the District has set several goals that will be supported by implementing the NEVI Formula Program. Full implementation will be instrumental in helping the District meet its goal of reducing transportation produced GHG emissions by 60 percent by 2032 while experiencing a growth in the population of 35 percent by 2050¹⁰.

Public Transit: Public transit is a critical mechanism for the District to achieve GHG emissions reductions with a growing population; a third of the District's commuters use transit services provided by Washington Metropolitan Area Transit Authority (WMATA) and DC Circulator. The WMATA Board recently adopted a goal for a 100 percent zero-emission fleet by 2045 (Figure 7) and WMATA is in the process of constructing its first all-electric garage in the District. DDOT has finalized the DC Circulator Zero-emission Fleet Transition Plan that calls for a fully zero-emission fleet by 2030 (Figure 8). DDOT will coordinate electrification efforts with WMATA and the NEVI Formula Program to maximize return on investment and develop a robust EV charging network.

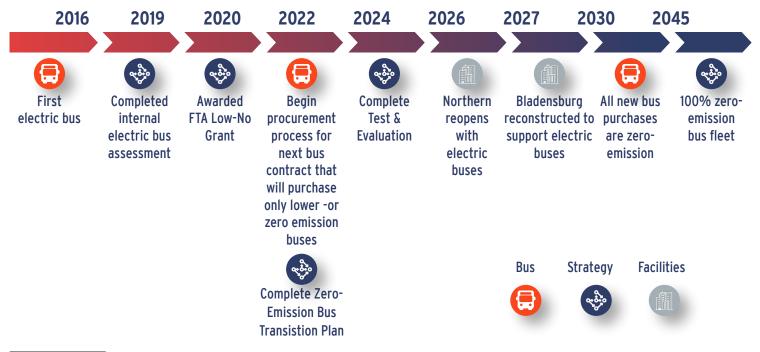


Figure 7. WMATA's fleet transition timeline.¹¹

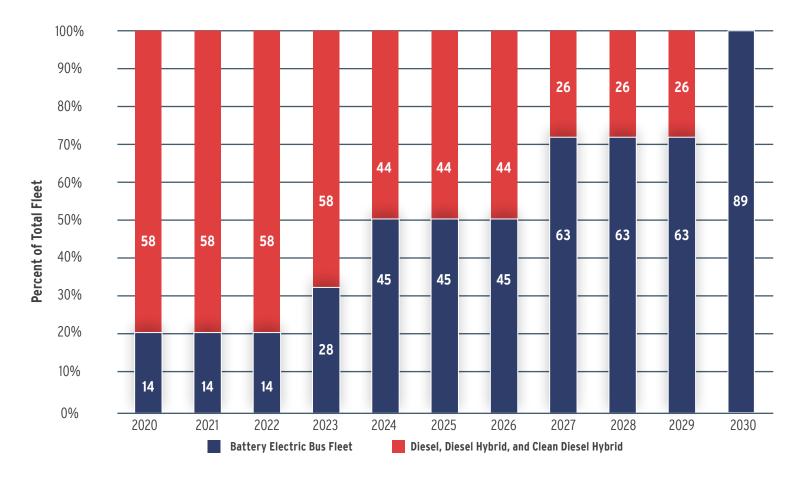
WMATA. April 2022. Zero-Emission Bus Update. https://www.wmata.com/initiatives/plans/upload/ZEB-Update-April-2022.pdf

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¹⁰ Sustainable DC 2.0 Plan. 11 WMATA, April 2022, Zero

Figure 8. DC Circulator fleet transition timeline.¹²



Freight and Goods Movement: Efficient freight movement is essential for the District's economy. Nearly all–99 percent–of goods activity in the District is supported by trucks, and freight traffic is expected to grow by 74 percent over the next 30 years¹³. To support this growth, a Freight Priority Network was developed by the District to target improvements to decrease travel time and increase reliability.

<u>DDOT developed a Freight Plan</u> with the goal of investing in infrastructure improvements and implementing operational improvements relating to the national freight network; improving the state of good repair of the national freight network; using advanced technology to improve its state of good repair; and improving the safety, security, and resilience of freight transportation.

AFC NETWORK

DDOT has been coordinating with neighboring jurisdictions to ensure regional connectivity, all District AFCs selected for designation connect with AFCs in Maryland and Virginia.

Pending Corridors

Rhode Island Avenue (US-1/US-29), Pennsylvania Avenue SE, and I-395 and I-695 are designated as pending corridors (as shown in Table 8 and Figure 9). DDOT will use the NEVI funds to deploy NEVI compliant DCFC chargers along these corridors to be certified as "fully build-out" by the end of FY2023.

DDOT. May 2022. DC Circulator Zero-Emission Fleet Transition Plan.

Ready Corridors

New York Avenue (US-50), I-295, and Anacostia Freeway (DC-295) are designated as ready corridors (as shown in Table 8 and Figure 9). These corridors will meet the NEVI Formula Program goal of accelerating equitable EV adoption by developing a regional network of corridors with easily accessible charging stations. DDOT has been coordinating with neighboring jurisdictions to ensure regional connectivity; as shown on the Alternative Fueling Station Locator, all District AFCs selected for designation connect with AFCs in Maryland and Virginia.





Table 8. Ready and Pending AFC Corridors.

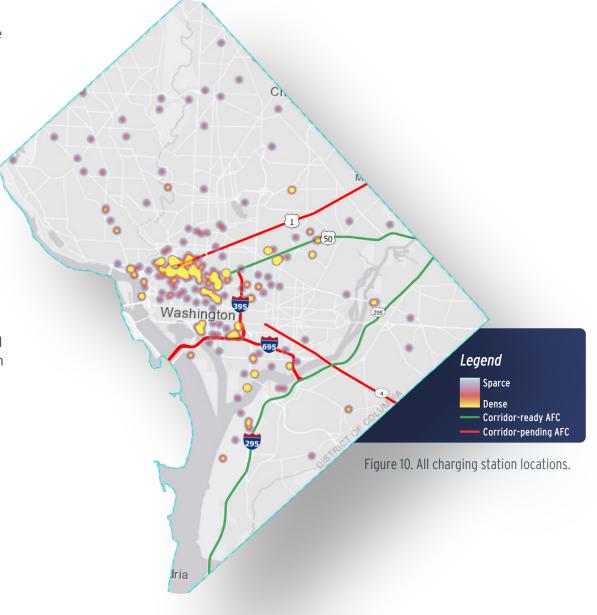
AFCs	CORRIDOR LIMITS		STATUS
New York Avenue (US-50)	5th Street, NW	DC-Maryland NE Boundary	Ready
I-295 and Anacostia Freeway (DC-295)	DC-Maryland SE Boundary	DC-Maryland NE Boundary	Ready
I-395 and I-695	DC-Virginia SW Boundary	New York Ave and I-295	Pending
Rhode Island Avenue (US-1/US-29)	Connecticut Avenue, NW	DC-Maryland NE Boundary	Pending
Pennsylvania Avenue, SE	Independence Avenue, SE	DC-Maryland SE Boundary	Pending

EXISTING LOCATIONS OF CHARGING INFRASTRUCTURE ALONG AFCS

The District already has extensive EV charging infrastructure (See Figure 10). As of September 31, 2021, there were 6,133 electric vehicles in the District and a total of 671 ports¹⁴. At that time, the ratio of EVs to ports was

9.14, while the average ratio for all states was 14.2, indicating that the District was in a good position to support current EVs.

PEPCO data shows approximately 249 public Level 2 EV charging stations with 654 ports and eight public DCFC locations with 39 ports. Figure 10 shows EV charging station locations while Figure 11 and Table 9 lists only DCFC locations. A complete table with Level 1, Level 2, and DCFC is shown in the Appendix.



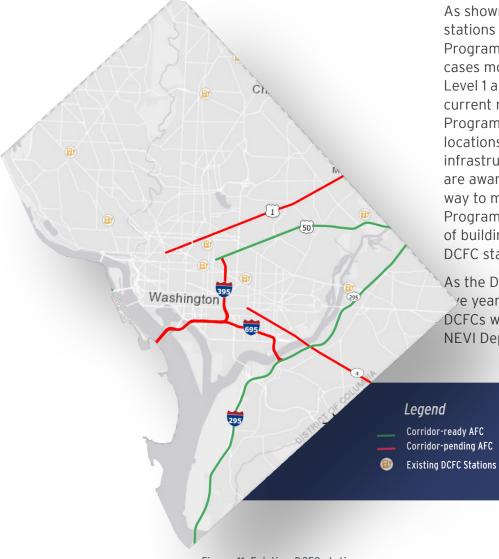


d Current of the District of Columbia

ID	STREET ADDRESS	DCFC PORTS	EV NETWORK	EV CONNECTOR TYPES
144129	3399 Benning Rd NE	2	Non-Networked	CHADEMO J1772COMBO
154661	1855 Wisconsin Ave NW	8	Tesla	TESLA
163628	5929 Georgia Ave NW	3	Electrify America	CHADEMO J1772 J1772COMBO
169964	2438 Market Street NE	12	Tesla	TESLA
187947	3355a Benning Rd NE	1	ChargePoint Network	CHADEMO J1772COMBO
198567	870 9th St NW	7	EVgo Network	CHADEMO J1772COMBO
198568	800 P St NW	2	EVgo Network	CHADEMO J1772 J1772COMBO
198664	50 Massachusetts Ave NE*	4	EVgo Network	СНАДЕМО Ј1772СОМВО

Table 9. Existing DCFC Stations.

* NEVI Compliant



As shown in Table 9, only one of the DCFC stations is fully compliant with the NEVI Formula Program requirement. It is possible–and in some cases more cost-effective–to upgrade existing Level 1 and Level 2 charging stations and convert current non-compliant DCFCs to use NEVI Formula Program-approved EVSE. Capitalizing on these locations that already have some supporting infrastructure, willing hosts, and motorists who are aware of their location could be an effective way to maximize the impact of the NEVI Formula Program. DDOT will also investigate the feasibility of building new, NEVI Formula Program compliant DCFC stations at these existing locations.

As the District's NEVI program expands over the re year period, new locations for siting compliant DCFCs will be identified in annual updates to the NEVI Deployment Plan.

Figure 11. Existing DCFC stations.

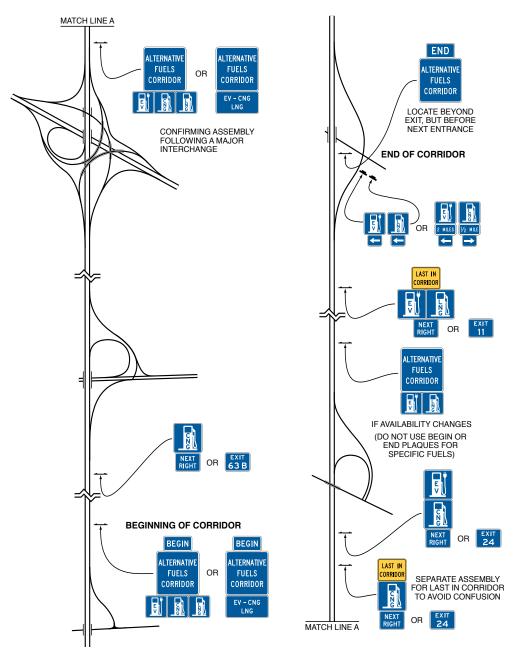


INFORMATION DISSEMINATION REGARDING STATION AVAILABILITY

Currently, most EV users rely on charger provider-specific apps like ChargePoint, Tesla, or Electrify America, or third-party apps like PlugShare and the Alternative Fuel Data Center Station Locator Tool provided by the USDOE. DDOT will emphasize Open Charge Point Protocol (OCPP)-compliant charging infrastructure deployment to ensure data interoperability among different providers so all district residents and visitors can seamlessly charge vehicles and access real-time information as detailed in the NEVI NPRM §680.106.

The District will also create a dashboard on the project website to provide EV charging station data to the public. The dashboard will create a visual presentation summarizing the number of EV charging stations and quantifying EV chargers by type, ownership, charge rate, and other information required to provide an accurate snapshot of EV charging station status in the District. Location and other data will also be available free of charge to third parties-like Google, Waze, and other navigation apps-who are likely to create maps of charging station locations.

Initially, the District will require more investment in notifving users of the available EV charging stations throughout the city until a significant number of charging stations are deployed. The District will adopt and implement special signage recommended by the FHWA through the Manual on Uniform Traffic Control Devices (MUTCD). Figure 12 shows an MUTCDrecommended example. General service signs will be located in advance of DCFC stations guiding users to chargers located off major arterials or interstates. EV regulatory signs will allow only EV-type vehicle parking at the chargers. These signs will also provide information on charging time duration and other restrictions. EV parking stencils may be deployed with regulatory signs to improve EV parking spot designation visibility. DDOT may develop supplemental signs if suitable signs are not adopted in the MUTCD for unauthorized vehicle enforcement. Trailblazer signs will be considered to quide residents and visitors to the EV chargers at high-traffic locations.





KNOWN RISKS AND CHALLENGES

The NEVI Formula Program is a much-needed investment in EV charging infrastructure, but the fast pace of change in the industry introduces risks to successful implementation. Such risks create unique challenges for both states and private sector station owners. Table 10 describes anticipated challenges and corresponding mitigations.

Table 10. Challenges and possible mitigations.CHALLENGEDESCRIPTIONWhile EV software and hardware are in the being standardized, it is not yet: freque

Lack of standardization	While EV software and hardware are in the process of being standardized, it is not yet; frequent changes to things like charger plugs and cables and data sharing protocols cause issues.	DDOT will follow industry best practices and FHWA guidance while staying abreast of industry changes.		
Utilities	Utilities must interconnect charging infrastructure, develop tariffs that promote beneficial charging behavior, and develop grid modernization programs that promote vehicle-to-grid options.	The District has and continues to advocate for grid modernization to promote the utility's role in promoting beneficial charging and relying on non-wires alternatives rather than traditional grid upgrades.		
Policy changes	Because the industry is still young, many issues may arise that require policy changes to address, including access to parking garages with parking spaces, curbside parking requirements, separate meters, and right of way (ROW) access to charging stations on private property.	DDOT and other agencies work closely to track potential changes nationally. On the local level, DDOT and other agencies will work with DC City Council to address issues proactively.		
Vandalism	Damage to EV charging equipment is a concern especially for less durable components like cables.	DDOT will work with vendors to develop requirements to prevent vandalism by using retractable cords, vandal-proof chargers, bollards, lighting, and when applicable surveillance cameras.		
Business model	Profitability is the key to long-term success of stations. Costly demand charges might reduce overall usage and erode profitability.	Implementing tariff incentives may help manage demand and ensuring a strong demand management software that predicts and smooths peak demand will help.		
Equity	Ensuring benefits of the NEVI Formula Program are equitably distributed both for deployment and usage. This is a priority goal for DDOT.	DDOT will implement a robust public outreach program and develop a formula to ensure third-party locations in DACs.		
Construction	Construction activities require permits and coordination with various stakeholders like the permit office, PEPCO, and the public. Therefore, these activities have the potential to delay deployment.	DDOT will address several construction requirements in advance, including working with PEPCO to identify power needs in the planning stages.		
Workforce availability	EVSE is an emerging market and relatively few people are trained to construct, operate, and maintain charging stations.	DDOT plans to create several webinars and education programs to develop local workforce capabilities and will explore RFP requirements to ensure a DC-based workforce is developed.		
Supply chain issues	EVSE equipment is facing production delays, which will only worsen as all states place orders for NEVI-compliant equipment.	DDOT will coordinate with PEPCO and vendors to understand timelines and will consider group ordering with neighboring states		



POSSIBLE MITIGATIONS

Table 10. Challenges and possible mitigations.

CHALLENGE	DESCRIPTION	POSSIBLE MITIGATIONS
Cybersecurity	EV chargers will be network connected to accept credit card payments, which introduces the risk of cyberattacks.	DDOT will seek FHWA guidance on cybersecurity standards to implement and will follow industry standards established by the National Institute of Standards and Technology (NIST) for cyber physical systems.

EV CHARGING INFRASTRUCTURE DEPLOYMENT

FUNDING SOURCES

DDOT will receive a total of approximately \$16,679,459 over the next five years through the NEVI Formula Program. A 20 percent match of this amount is \$3,335,892. This non-Federal match funding will be sourced from private funding from third-party vendors and utility rebates. Local match percentages may vary by station, depending on location, site readiness, and need for stations to achieve the goals of the Justice40 initiative. Based on research and outreach, DDOT estimates that full costs to build a NEVI compliant set of four DCFC charging stations will cost around \$1 million per site on average. Anticipated funding will allow AFCs to be fully compliant and complete. Following certification of AFC completion, DDOT will explore additional locations such as publicly accessible parking garages and retail parking lots which would attract significantly higher private matches because of higher return on investment.

2022 INFRASTRUCTURE DEPLOYMENTS/UPGRADES

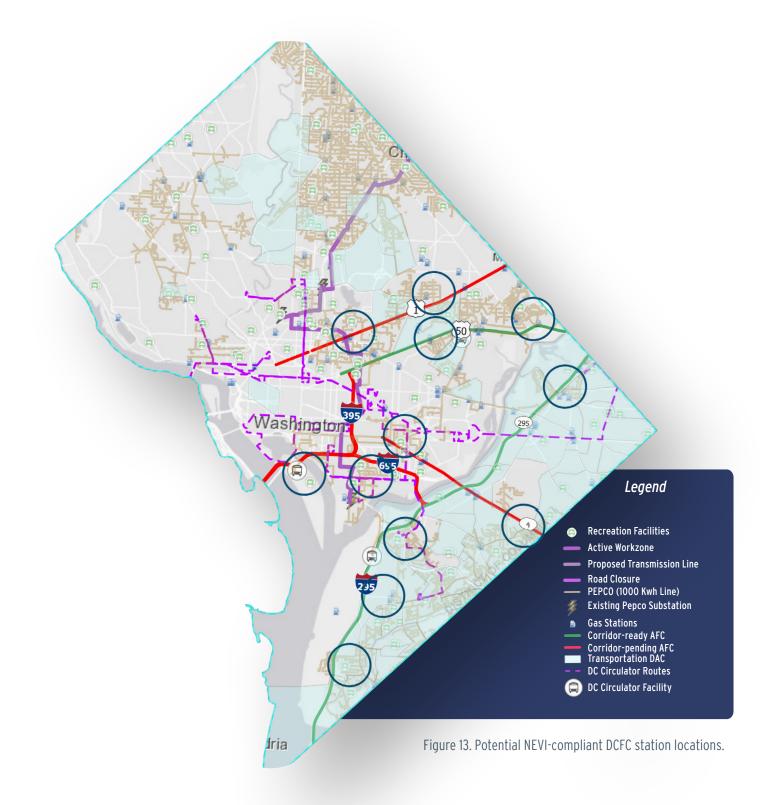
As described in the Contracting section above, DDOT will use competitive procurements or public-private partnerships to select interested parties who apply for NEVI Formula Program funding. These awarded parties will use NEVI Formula Program funding to install, operate, and maintain EV charging stations in the District. With this competitive procurement, DDOT will ensure NEVI minimum compliance standards as well as select awardees whose sites offer advantages to the District's efficient, effective use of NEVI Formula Program funds to meet this plan's goals. The Joint Office NEVI Deployment Plan template requested the District provide "approximate locations of new EV charging stations needed and existing EV charging stations that may be upgraded to meet NEVI compliant standards." This section is designed to detail such approximate locations, though final locations will be determined through the competitive procurement application and selection process. DDOT has considered the criteria in Table 11 to determine where NEVI-compliant DCFC stations should be located.

CRITERIA	DESCRIPTION
AFC Status	Existing AFC or nominated as future AFC.
Site Feasibility	Investigation of available sites for new stations (publicly-owned property, existing gas stations, etc.) or existing EV charging stations that can be upgraded.
Utility Availability	Current PEPCO grid capacity and available feeder networks.
Equity	Equitable distribution of benefits.
Current EV ownership	Current EV ownership in the District by ZIP code to ensure stations serve needs.

Table 11. Criteria considered for DCFC location identification.



Preliminary screening based on the criteria listed in Table 11, Figure 13 shows approximate location of potential sites for DCFC stations. DDOT, in coordination with stakeholders, has conducted extensive mapping to identify locations where new NEVI-compliant DCFC stations can be installed, and which existing chargers can be upgraded to NEVI standards. Existing charging stations that may be updated-pending further vetting and coordination with owners-are shown in Figure 14 and Table 12. The Appendix shows locations of all Level 1 and Level 2 chargers.



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ID **STATION NAME** STREET ADDRESS **EV NETWORK** 144129 3399 Benning Rd NE Non-Networked Transco 148383 Rhode Island Row 2350 Washington Place, NE. SemaCharge Network 148408 MOM's Organic Market - Ivy City 1501 New York Avenue NE SemaCharge Network 163546 WEST HALF 2 & 3 WEST HALF EV 1 1201 Half St SE ChargePoint Network 164765 20 M St. Parking Blink Network 20 M St. SE 167874 **City Center Hines** 870 9th Street Northwest SemaCharge Network 168255 M FIRST STATION #1 1000 First St SE ChargePoint Network 187947 DOEE DISTRICT CABS 3355a Benning Rd NE ChargePoint Network 194612 1331 1331 Maryland Avenue Southwest SemaCharge Network 194723 District Wharf Parking Garage - Public Access on P1 1000 Maine SemaCharge Network 196045 Target Ivy City 1515 New York Avenue Northeast SemaCharge Network 198568 City Market at O 800 P St NW EVgo Network

1000 S Capitol St SE

Table 12. Charging stations that may be upgraded using NEVI Formula Program funding.

220745

1000 South Capitol



SemaCharge Network



Increases of Capacity/Redundancy Along Existing AFC

Upgrading existing stations to meet NEVI Formula Program minimum requirements and installing new stations along the corridors will reduce range anxiety by increasing charging port availability, reducing wait time for charging, and providing options for residents that do not have the ability to charge at home or at work.



To realize the District's goal of providing a reliable, NEVI-compliant DCFC station network, it will be critical to ensure redundancy of charging locations along the corridors. The District will strive to provide multiple NEVI-complaint DCFC stations along any AFC within 50 miles. Throughout implementation, the District will identify opportunities to improve the charging station network to facilitate both local and regional travel. DDOT will coordinate with local stakeholders, regional planning agencies, Maryland, and Virginia to ensure the regional network includes redundancy.

Electric Vehicle Freight Considerations

When AFC charging stations are completed, DDOT will begin planning for installation of chargers for light- and medium-duty trucks. Heavy-duty trucks and tractor-trailers are limited within the District and the size and space required to serve these large vehicles makes implementation difficult in a dense urban environment like the District. However, charging stations for buses will be considered where commuter and tourist buses park and stations can be made publicly accessible. Charging station locations for light- and medium-duty trucks will be studied along District truck routes. The best locations for charging stations to serve these vehicles would be near upgraded PEPCO facilities that can provide much larger energy demand required to serve trucks compared to passenger vehicles.

Public Transportation Considerations

The two major public transit service providers in the District, WMATA and DC Circulator, are in the process of electrifying their bus fleets. DC Circulator, operated by DDOT, will be upgrading the South Capitol Street facility and planning to construct the Claybrick Road facility to transition to an all-electric bus fleet by 2030. Similarly, WMATA is upgrading the Northern and Bladensburg facilities to support a transition to a zero-emission fleet by 2045.

DDOT will coordinate charger installation along AFCs with the fleet transition plans of WMATA and DC Circulator. PEPCO will be the utility provider for both privately owned vehicles and the public transit fleets, so co-location of charging stations, where feasible, has the potential to reduce cost and accelerate deployment. It may also be possible to locate Capital Bikeshare docking stations near DCFCs to capitalize on grid improvements to serve electric bicycles. DDOT will include updates from the WMATA and DC Circulator transition plans in annual NEVI Deployment Plan updates.

PEPCO will be the utility provider for both privately owned vehicles and the public transit fleets, so co-location of charging stations, where feasible, has the potential to reduce cost and accelerate deployment. This is a unique strength for the District.

DDOT is currently transitioning DC Circulator buses to a battery-electric fleet (routes shown in Figure 15). Currently, there are 14 BEBs deployed as part of pilot programs out of a total fleet size of 72 buses. DDOT expects to add an additional 14 BEBs in 2023 to comply with the moveDC goal of converting 50 percent of the DDOT fleet to electric by 2023. DDOT's goal is to make the entire DC Circulator fleet BEBs by 2030, supported by the DC-Circulator Zero-Emission Fleet Transition Plan. The fleet is stored at three separate facilities: 17th Street, Hains Point, and South Capitol Street. Pilot BEBs are operated out of the South Capitol Street facility which is being retrofitted to support a larger future BEB fleet, up to 46 BEBs. The DC Circulator plans to open a new facility in



2028 at Claybrick Road in Maryland to support the fleet's transition to BEBs. Both South Capitol and Claybrick Road facilities require power capacity upgrades.

DDOT will implement charge management strategies for bus charging to maintain bus availability and serve passenger demand. This aligns with the Clean Energy Omnibus Amendment Act in 2018 to transition to clean energy and reduce GHG emissions. It also aligns with Clean Energy DC recommendations for DDOT and WMATA to replace diesel buses with BEBs.

DDOT will coordinate charger installation along AFCs with the fleet transition plans of WMATA and DC Circulator. PEPCO will be the utility provider for both privately owned vehicles and the public transit fleets, so co-location of



charging stations, where feasible, has the potential to reduce cost and accelerate deployment. DDOT will include updates from the WMATA and DC Circulator transition plans in annual NEVI Deployment Plan updates.

FY 2023-2026 INFRASTRUCTURE DEPLOYMENTS

Following FHWA guidance, DDOT will initially focus on deployment to achieve AFC completion. Upon certification that these corridors are fully built out, DDOT will utilize additional funding allowed under the NEVI Formula Program to undertake deployment on other priority corridors in the District. Throughout the duration of the NEVI Formula Program, DDOT will use approximately two percent of funds for program management. Table 13 shows expected NEVI Formula Program funding for DDOT's efforts.

NEVI FUNDING YEAR	FUNDING & DEPLOYMENT PRIORITIES	FEDERAL FUNDING		MATCHING FUNDING	
2022	FHWA Designated AFCs	\$	2,468,807	\$	493,761
2023	AFCs + Additional DDOT Priorities	\$	3,552,663	\$	710,533
2024	Additional DDOT Corridors	\$	3,552,663	\$	710,533
2025	Additional DDOT Corridors	\$	3,552,663	\$	710,533
2026	Additional DDOT Corridors	\$	3,552,663	\$	710,533
Total	AFCs + Additional DDOT Priorities	\$	16,679,459	\$	3,335,892

Table 13. Expected NEVI Formula Program funding.

STATE, REGIONAL, AND LOCAL POLICY

Because the District is unique as a city, state and local policy and planning are intricately linked. At the same time, regional coordination is critical to the District's goals because many regional impacts are under the purview of neighboring states of Maryland and Virginia. DDOT is coordinating and will continue to coordinate with these states and the region's metropolitan planning organization (MPO)–the Metropolitan Washington Council of Governments (MWCOG). MWCOG has begun a regional effort to plan for EVs. Spearheaded by the Climate, Energy, and Environment Policy Committee (CEEPC) of MWCOG, this effort will produce the Regional EV Infrastructure Deployment Plan that will assess charging needs and identify deployment locations across jurisdictional boundaries in partnership with the District, Maryland, Virginia, and local governments. This will ensure consistent methods and assumptions are used and that infrastructure is deployed in the most cost-effective manner that maximizes motorist benefit. The plan will consider MWCOG's defined Regional Activity Centers and Equity Emphasis Areas in addition to defined EV corridors. In addition, the effort may enable governments to jointly apply for grant funding to further deployment efforts.

In addition, the District is a member of the Transportation and Climate Initiative. This organization's <u>Clean</u> <u>Vehicles and Fuels</u> work enables states to share best practices and coordinate to establish AFCs. The Northeast Electric Vehicle Network was established specifically to coordinate charging infrastructure planning.

DDOT will also work with WMATA to coordinate fleet electrification needs and associated utility upgrades and explore the possibility of joint procurements to reduce costs for both parties. Maryland and Virginia may also benefit from joining joint procurements.

Particularly relevant to the District is the large proportion of National Park Service-owned land. Installation of DCFCs on NPS property may be beneficial for visitors to the District; DDOT will work closely with NPS staff to identify locations that minimize the visual and other impacts on important national sites.



On the hyper-local level, DDOT will coordinate with Advisory Neighborhood Commissions and other communitybased organizations to identify and develop policy changes related to zoning and permitting.

IMPLEMENTATION

DDOT's role will be to ensure that this NEVI Deployment Plan is implemented in compliance with the NEVI Formula Program, applicable laws and regulations, and in a way that equitably serves the District's residents and visitors. The intent is to incentivize third-party EVSE installation via a method as described in the Contracting section. Possible exceptions could be made if needed to promote EVSE expansion to specific disadvantaged communities (DACs) where third-party investors are less interested in being site hosts.

While FHWA provided guidance and proposed rulemaking will lay out key operation and maintenance guidelines, DDOT will be making key decisions on program planning, procurement, deployment, and program management. Further details on key elements of DDOT's strategies on these items are below.

STRATEGIES FOR EVSE OPERATIONS & MAINTENANCE

All charging stations are expected to be independently owned and operated, with DDOT providing program oversight. Operation and maintenance of charging stations will be contracted to third parties in a way that makes efficient use of Federal funds to maximize the impact of program funding.

DDOT will establish station performance requirements following FHWA guidance and applicable District standards and procedures to ensure the charging network is reliable and available. To monitor charging station performance, DDOT will collect data and determine if performance meets established thresholds. Potential performance requirements include requiring stations to be available 24/7, maintaining network connectivity, automated service outage notifications, decreased charging performance, pricing, secure transactions, etc. as described in the various sections of the NEVI Notice of Proposed Rulemaking.

STRATEGIES FOR IDENTIFYING ELECTRIC VEHICLE CHARGER SERVICE PROVIDERS AND STATION OWNERS

DDOT will develop a dashboard on the project website to provide information on upcoming procurement opportunities, project status, and selected locations, as well as seek to provide procurement process transparency to the general public in compliance with NPRM §680.106 sub-section A.

DDOT will then monitor progress and coordinate advancements with vendor and project teams in multiple meetings as indicated in the contract/grant agreement. DDOT will develop criteria for vendor evaluation in the solicitation or grant application process, depending on the selected approach.

EVSE providers will be selected based on demonstrated experience and capability to provide services for at least five years from the date of the installation. In addition, providers should be capable of keeping charging stations in service beyond the availability of the NEVI Formula Program or District funds, with a few possible exceptions to encourage charging station ownership in DACs.

Outside of the NEVI Formula Program, DDOT will explore establishing a rebate program, tax credits, and lowinterest loans to leverage private investments in EVSE infrastructure. These tools will optimize the Program's investment, provide opportunities for quick infrastructure deployment, and reduce the risk of incomplete or poorly maintained assets. Such incentives will make EVSE business opportunities more affordable. Additionally, the District can work with PEPCO to offer rebates to private investors. The Electric Vehicle Readiness Amendment Act of 2022 (DC ACT 23-572) required DOEE to establish incentives for property owners to install EV make-ready infrastructure; this could be expanded or built upon to further incentivize electrification.



DDOT strongly encourages the use of Disadvantaged Business Enterprises (DBE) and Small Business Enterprises (SBE) for contracting and subcontracting opportunities. The goal is to assist minorities, women, and other socially and economically disadvantaged individuals or small businesses to participate in EV charging infrastructure development.

STRATEGIES FOR EVSE DATA COLLECTION & SHARING

All NEVI Formula Program chargers will need to be internet-connected to gather real-time data and make it available free of charge through an application programming interface (API), the cloud, or a physical download and transmission to DDOT. To qualify for the NEVI Formula Program funds, all chargers will be equipped to collect and aggregate this data for owner-operators to share with DDOT as outlined in the NEVI NPRM §680.106.

All charging stations will utilize OCPP, a communications protocol that facilitates information exchange between an EV charger and its backend management system. OCPP is an open-source protocol that requires no licensing and provides interoperability between charging platforms supplied by different vendors.

Data collection and sharing requirements will be defined in more detail in the contract or grant agreement document that DDOT will develop, gathering data and reporting the primary condition and defining data format requirements and transmission media. The main parameters are that collected data is real-time with automatic updates. Open data sharing will be required from all vendors. Usage data, upon request, will also be available for the public and other interested parties for research and analysis purposes. Data will also be shared with the USDOE to allow the agency to update its station locator website. The vendor's provided data will be used to develop a dashboard for the public to see the Program's progress to provide transparency as described in the Contracting section. Collected data will also be used to track EVSE for the achievement of Justice40.

Data elements anticipated to be reported include charging station location, port number, type of ports, port availability, wait time, and uptime. More specific data will be collected, such as energy cost and consumption, maintenance records, reliability, utilization, and charging times, etc. as detailed in sections of the NPRM §680.106. Collected data will capture the progress of EVSE in the District and enable future predictions on vendor performance. It will help assess the required growth or expansion of existing charging stations and predictions for energy consumption demand and its impact on the grid for agency planning purposes. In addition, it will also be essential to collect driver feedback to improve deployment over time.

STRATEGIES TO ADDRESS RESILIENCE, EMERGENCY EVACUATION, SNOW REMOVAL/SEASONAL NEEDS

Resilience:

The District has already experienced about ten inches of sea level rise over the last 82 years, according to riskfinder.org. Climate change is projected to increase the rate of sea level rise, increasing financial burdens to the District and disrupting transportation. According to the <u>US Army Corps of Engineers</u>, the District is predicted to experience up to 3.4 feet of additional sea level rise by 2080; by 2050 water levels are expected to rise by <u>0.6-1.8</u> feet. In addition, more severe storm surges, high tides, and higher precipitation rates will all contribute to making coastal flooding more powerful and devastating.

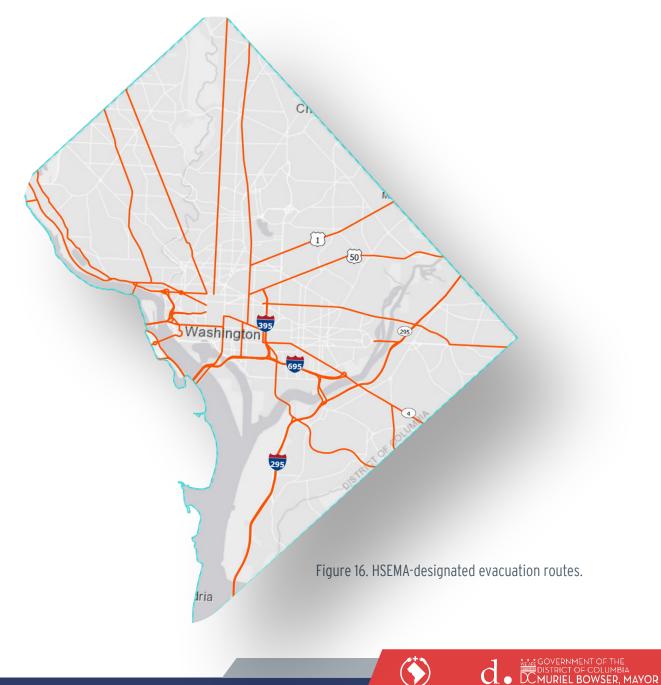
Charging stations need to be resilient to extreme weather conditions caused and exacerbated by climate change. Locations will be analyzed using currently available DOEE, USDOT, and other environmental organization tools to assess site vulnerability to severe weather risks. The <u>Climate Ready DC</u> plan is the District's strategy and roadmap to making the city more resilient to climate change.



The National Oceanic and Atmospheric Administration's <u>Sea Level Rise Viewer</u> shows areas projected to be affected by a three foot water level increase; no chargers are planned for these areas. However, if charging stations must be located within vulnerable areas at a later date for availability and equity reasons, DDOT will assess opportunities to add redundancy and improve overall resilience. All charging infrastructure design and placement will follow Climate Ready DC <u>Resilient Design Guidelines</u>.

Emergency Evacuation:

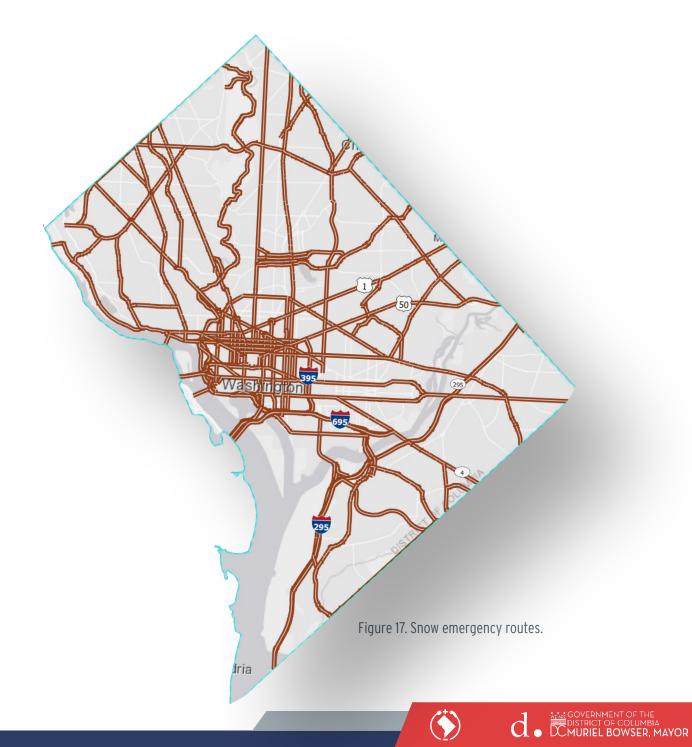
DCFC charging stations along AFCs will serve an essential role in helping the public evacuate during emergency conditions by providing an opportunity to recharge vehicles near the emergency route. Figure 16 shows HSEMA-designated evacuation routes in the District. Residents and commuters can take 25 routes out of the District in an emergency; all extend toward the Capital Beltway (I-495). The <u>major evacuation routes</u> include Canal and Benning Roads; Constitution, Wisconsin, Connecticut, Georgia, Rhode Island, New York, Kenilworth, and Pennsylvania Avenues; 16th Street; Interstates 295 and 395; and the Francis Scott Key Memorial Bridge. Because all District AFCs are designated as emergency evacuation routes, charger installation along these routes will serve both



daily travelers and evacuees. The Evacuation Route Near Me website can be updated to include charging station locations to guide motorists on the roadway during evacuation.

Snow removal/seasonal needs:

The District Snow Team performs snow removal. The team is composed of DPW and DDOT and is assisted by other District agencies. The District Snow Team is tasked to clear streets of snow and ice to promote safety on the roads. The District identified Snow Emergency Routes (SERs) as shown in Figure 17. Motorists are not allowed to park on SERs, enabling the District Snow Team to plow and salt along major roads. Placing charging stations along SERs would allow access to charging stations sooner than if placed along roads that are a lower priority for snow removal. In addition, any third-pary EVSE station owner operators will be required by contract terms and conditions to maintain 24/7 accessibility and 97% uptime, which will include provisions for snow removal.



Future implementation

DDOT will also investigate curbside charging. This may include assistance with the permitting process for private entities to operate and maintain these charging stations. Like charging stations, DDOT will not own curbside chargers but will instead facilitate funding allocation to support installation. Curbside charging may not be feasible in historic or Federal districts, but is possible for other areas.

STRATEGIES TO PROMOTE STRONG LABOR, SAFETY, TRAINING, AND INSTALLATION STANDARDS

Implementation of NEVI-compliant DCFC stations will create many new opportunities for electricians and other construction workers in the District. To ensure safety and quality work, the District will invest in specialized training developed by a third-party to grow a highly skilled workforce for installing, troubleshooting, and maintaining EV charging infrastructure. In addition to electrician training and apprenticeship programs available in the District, DDOT will require electricians to obtain the Electric Vehicle Infrastructure Training Program (EVITP) credential or similar as outlined in NPRM §680.106 sub-section J. It is also anticipated that some charging station vendors may provide training, especially for DBE/SBE participants, to ensure local workforce diversity. To achieve the goals of the Justice40 Initiative, particular emphasis will be placed on investing in DACs by offering a wide range of training programs, ranging from entry-level to apprenticeship, to aid economic growth and development.

DDOT promotes the traveling public's safety by offering safety guidance on all projects and safety programs to District residents. DDOT will ensure the chosen vendor complies with safety requirements and emphasizes safety when designing, developing, installing, and maintaining charging stations. The vendors will need to ensure adequate lighting, fire protection, and other traffic safety features, maintaining safety at all charging stations. The charging station design and layout should ensure no conflicts between pedestrians and motorists and no visual obstructions are created for motorists entering/exiting the station. Various safety training and programs are available for the contractors/grantees participating in DDOT projects and vendors are expected to participate and take full advantage of available resources to ensure safety.

Currently, there are no published standards for charging station installation, testing, commissioning, maintenance, and operations. DDOT standard specifications for highways and structures do not cover EV charging infrastructure. DDOT will develop requirements based on best practices from other states, guidance from FHWA, and input from the EV community and other agencies that allow for innovation while ensuring a standardized experience for motorists. While vendors are expected to have proprietary hardware and software, all will share data with DDOT and provide industry-standard charging connectors.

CIVIL RIGHTS

The <u>Transportation Equity and Inclusion Division</u> administers compliance programs and policies related to Civil Rights for DDOT. This includes but is not limited to the Americans with Disabilities Act (ADA), Title VI of the Civil

Rights Act, and Section 504 of the Rehabilitation Act. This Division is a committed partner in the NEVI Formula Program from planning through implementation.

PUBLIC INVOLVEMENT AND PLANNING

DDOT is committed to ensuring accessible and inclusive public involvement in all agency projects including the NEVI Formula Program. The project DDOT is committed to elevating and advancing transportation equity by evaluating our policies, planning, community engagement, and project delivery, to ensure public investments in transportation justly benefit all residents, visitors and commuters.

- Transportation Equity and Inclusion Division

manager for the NEVI Formula Program will review and use the <u>Public Involvement Plan (PIP)</u> created by DDOT which includes requirements related to Civil Rights and ADA compliance. The PIP will guide the execution of the NEVI outreach plan. Comments received to date through DDOT's NEVI outreach efforts have helped to create the NEVI outreach plan. As outreach will continue to occur, as discussed in Public Engagement section, input received from future outreach efforts will help the project team continue to update this plan throughout the five-year period to meet the evolving needs of the public.

Procurement

The Office of Contracting and Procurement will assist the project team in procurement/grant award activities and will require compliance language and documentation for all NEVI related contracts/grant agreements. At the time of bidding/submission of grant applications, an executive officer of the entity will be required to execute an acknowledgement that their company is in compliance. At the time of contracting/award, additional language for ongoing verification may be added.

Installation

As charging equipment is installed, testing will occur to check for ADA compliance. DDOT will ensure information related to EV charger location and availability is shared with the public in accessible formats.

Operations and Maintenance

Third-party charging equipment operators/maintainers will be responsible for sharing performance and other data with the project team. Any contractual verification obligations for Civil Rights or ADA compliance will be addressed throughout the term of the contract/grant agreement.

EQUITY CONSIDERATIONS

DDOT's <u>Equity Statement</u> recognizes that there are inequalities in transportation and commits the agency to advancing equity by evaluating polices, planning, community engagement, and project delivery. DDOT will implement the NEVI Formula Program to further the Justice40 goal to deliver 40 percent of all benefits of Federal investments to DACs.

IDENTIFICATION AND OUTREACH TO DISADVANTAGED COMMUNITIES IN THE STATE

As described in previous sections, DDOT will conduct robust public engagement. DDOT will treat the NEVI Formula Program like other transportation projects and follow a PIP. Broad goals of public outreach include:

- ~ Establishing EV needs based on community feedback
- ~ Understanding local job and education needs
- Minimizing local disruptions
- ~ Establishing partnerships with the community to promote job growth

PROCESS TO IDENTIFY, QUANTIFY, AND MEASURE BENEFITS TO DACS

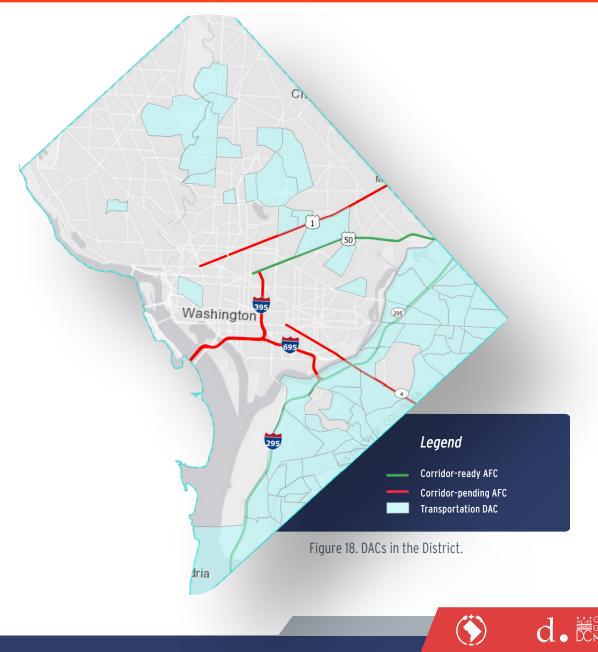
DDOT has reviewed several DOT and DOE tools (Table 14) available to identify DACs and will use these tools to identify EV charger locations that will best serve communities with transportation access disadvantages (Figure 18). These communities are located mainly to the southeast of the Anacostia River, but also in other locations in the District. Communities east of the river have been historically felt separate from the rest of DC and it will be critical to avoid-and redress-this issue through implementation of the NEVI Formula Program. In addition to



charger location equity, DDOT will work with local organizations to ensure workforce development benefits accrue to DACs.

Table 14. DOT and DOE tools.

TOOL NAME	DESCRIPTION
EV Charging Justice40 Map	Tool from Argonne National Laboratory providing interactive maps of DACs
Screening Tool for Equity Analysis of Projects (STEAP)	Mapping tool from the Federal Highway Administration that supports environmental justice screening
Low-Income Energy Affordability Data Tool	Tool from the USDOE that provides estimates of low-income and moderate-income household energy data
Transportation Equity Analysis	Tools and resources from Argonne National Laboratory that support transportation energy equity analysis
Climate and Economic Justice Screening Tool (CEJST)	US DOT tool to help Federal agencies identify DACs that are marginalized, underserved, and overburdened by pollution as part of the Justice40 Initiative.
Equity Emphasis Areas Toolkit	The Transportation Planning Board of the MWCOG developed this tool to identify areas where interventions should be focused to promote equity, providing a locally calibrated tool.



BENEFITS TO DACS THROUGH THIS PLAN

There are several ways to calculate benefits accruing to DACs through projects funded through the NEVI Formula Program and DDOT will investigate to determine the most appropriate method. The following are potential methods:

- ~ Percentage of AFC miles through DACs as shown in Argonne National Laboratory's EV Charging Justice40 Map.
- ~ Total number of EV chargers installed in DACs
- Total amount of NEVI Formula Program funding allocated to DACs for workforce development programs
- Annual and total number of jobs generated by EVSE projects

Over 40 percent (54 percent) of current AFC route miles are in DACs (Table 15) enabling benefits to accrue to these communities in terms of reduced emissions and accessibility to EV charging stations. Beyond this, DDOT will seek to site additional stations in DACs after receiving "fully built out" status from USDOT. For the installation of stations, the District will promote DBE participation and report statistics on the number of DBEs that receive funding to install, operate, and maintain NEVI Formula Program-funded EV charging stations. DDOT strongly encourages the use of <u>Disadvantaged Business Enterprises (DBE)</u> and Small Business Enterprises (SBE) for contracting and subcontracting opportunities. The goal is to assist minorities, women, and other socially and economically disadvantaged individuals or small businesses to participate in EV charging infrastructure development. DDOT has implemented an online DBE Certification System to make it easier for disadvantaged businesses to do business with the agency. DBE goals are set according to <u>FHWA-compliant policies</u> and will be applied to the NEVI Formula Program.

AFC	MILES IN DAC	TOTAL MILEAGE	PERCENT IN DAC
DC-295 and I-295	12.0	12.0	100.0%
Pennsylvania Ave	1.6	3.5	45.7%
US-50	1.6	4.4	36.4%
US-1	0.5	4.7	10.6%
I-395/695	0.0	4.5	0.0%
I-695	0.0	1.7	0.0%
Total	15.7	29.1	54%

Table 15. AFC route miles in DACs.

LABOR AND WORKFORCE CONSIDERATIONS

The District wants to create a hub for EV innovation and sustainability which can be achieved through public private partnership and developing policies and guidelines to attract the right employers and develop the local workforce.

The EV industry is forecasted to grow considerably in the coming decades and this growth will be concentrated in EV vehicle repairs and EV charging equipment manufacturing, installation, maintenance, and repair. The District is focused on working with labor unions, trade organizations, and other groups representing transit workers, electricians, and automotive service technicians to build a workforce that can support EVs and deliver good paying jobs for District residents by 2025.

These jobs typically fall into two categories:



- EVSE Equipment Installation: The workforce involved in charging facility design, implementation, and integration ranging from installation of residential chargers to fleet DCFC stations. Work will involve developing design plans, installation requirements, and obtaining local and state permits.
- EV Maintenance and Repair: Mechanics and service technicians with knowledge of equipment will help ensure a high level of reliability for the EV fleet. In concert with labor unions and trade organizations, the District plans to identify key training and education needs to provide District residents with the required skills in this area. The District will work with Virginia and Maryland to ensure District residents can provide their services in neighboring states.

EVITP CERTIFICATIONS

A considerable amount of EVSE installation involves supporting electric equipment and grid components; therefore, most work must be completed by certified electricians per NPRM §680.106. Existing and future electricians may need additional training to adapt to EV charging equipment work. EVITP is a nonprofit formed by automakers, utility companies, manufacturers, and safety organizations and provides the NEVI-recognized certification required for electricians. DDOT will ensure all technicians installing, operating, and maintaining EVSE have this or equivalent credentials.

EDUCATION PROGRAMS

The District has coordinated with several stakeholder agencies as described in State Agency Coordination. This coordination includes the topic of developing education programs for District residents. As part of the training development, the District will initially assess current workforce availability and needs. This will be done through industry outreach to include–at a minimum–employers, unions, and community organizations. In response to identified needs, the District will develop a curriculum and training materials in collaboration with local universities and community colleges. The curriculum will be updated regularly based on input and feedback from previously trained students and the industry.

DDOT already partners with the District Department of Employment Services (DOES) to provide <u>On-the-Job</u> (OJT) training through Title 23 CFR Part 230. This program enables candidates to receive hands-on training while employed, supporting streamlined workforce development for both candidate and employer. DOES will reimburse between 50 and 75 percent of candidate salaries for one to six months in most cases for qualifying District residents and employers.

EQUITY CONSIDERATIONS

Special consideration will be implemented to ensure NEVI Formula Program funds benefit DACs. In addition, the District will ensure DBE and local hire requirements are included in contracts/grant agreements.

CYBERSECURITY

With the continued advancement of technology, personal privacy risks have escalated rapidly; EV charging equipment is also subject to these risks. As DDOT will be contracting with third-parties for the purchase, installation, testing, operation, and maintenance of chargers, the responsibility for cybersecurity and privacy will lie with the third-party. However, DDOT will use the contractual/grant award process to ensure cybersecurity and privacy measures are met by these entities.

To ensure the third-party will meet all cybersecurity expectations and requirements, DDOT, along with the Office of Contracting and Procurement and the Office of the Chief Technology Officer, will add cybersecurity and privacy



related requirements to the procurement documents and final contracts/grant agreements. The procurement documents are expected to require third-party respondents to submit a cybersecurity plan as part of their bid response/application. This plan will encompass both the security and privacy solutions in place and should generally describe how the overall system will be protected from cyberattacks and how data will be securely stored, transported, and otherwise technically and physically protected against unauthorized access, destruction, modification, disclosure, or loss. As items contained within these plans may be considered trade secrets, these documents will not be in the public record.

The selected third-party may be required to participate in a privacy impact assessment with the project team as part of the final contracting/grant award. The final contract/grant agreement language will also include any ongoing required assessments of cybersecurity and data collection methods, ongoing updates to those methods, an understanding of software updates (timing and how it affects users), notification requirements for any security or privacy breaches, and language stating the third-party will comply with any local, state, and federal law as it relates to cybersecurity or privacy. The contract/grant agreement will also define what de-identified data will be shared with DDOT.

PROGRAM EVALUATION

DDOT will monitor the progress of charging station deployment, usage, and compliance with the minimum requirements of the NEVI Formula Program as described in the NEVI Notice of Proposed Rulemaking and report key information to both the general public and US DOT. Charging stations will be required to send usage reports to DDOT on a regular basis. At a minimum, the following information will be collected for each charging station site:

- Average kW used per charge
- Average charge duration
- ~ Total number of daily charges
- ~ Total kW consumed monthly
- ~ Daily downtime
- ~ Maintenance reports
- ~ As well as additional information described in the NPRM §680.106

DDOT will develop a dashboard and share this information publicly in real-time. DDOT will evaluate the program annually against goals. The implementation plan for subsequent years will be updated annually based on the evaluation, additional guidance from stakeholders, and requirements from the Joint Office.

DISCRETIONARY EXCEPTIONS

At this time DDOT has not identified the need for discretionary exceptions. DDOT is aware of the exception template and will work with applicants in the competitive procurement rounds to identify, document, and submit a necessary request for exemption information to FHWA for approval.



APPENDIX A - EXISTING ELECTRIC CHARGING STATIONS (AS OF 5/19/2022)

ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
43836	555 12th St NW	1	1		Non-Networked	43836	J1772 NEMA515
47194	1314 Harwood St	4	4		OpConnect	47194	J1772
56564	1300 19th St NW		2		ChargePoint Network	56564	J1772
57221	3000 K St NW		2		ChargePoint Network	57221	J1772
61098	870 9th St NW		20		Non-Networked	61098	J1772
64548	1828 L St NW		2		ChargePoint Network	64548	J1772
64549	1707 L St NW		2		ChargePoint Network	64549	J1772
65672	5355 Wisconsin Ave NW	4	2		Non-Networked	65672	J1772 NEMA515
68205	1212 New York Ave NW		2		ChargePoint Network	68205	J1772
70598	550 C St SW		2		ChargePoint Network	70598	J1772
76344	1717 K St NW		2		ChargePoint Network	76344	J1772
76345	1666 K St NW		2		ChargePoint Network	76345	J1772
76346	1700 K St NW		2		ChargePoint Network	76346	J1772
80503	79 Potomac Ave SE		2		ChargePoint Network	80503	J1772
81775	Joint Base Anacostia- Bolling Chappie James Blvd.	10	10		OpConnect	81775	J1772
94632	1255 22nd St NW		1		ChargePoint Network	94632	J1772
94807	1133 15th St NW		2		EV Connect	94807	J1772
94810	2001 L St		1		EV Connect	94810	J1772
94812	425 3rd St SW		1		EV Connect	94812	J1772
95423	440 1st St NW		1		Blink Network	95423	J1772



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
95813	480 L'Enfant Plaza Southwest		2		Blink Network	95813	J1772
96075	300 Riggs Rd NE		2		Blink Network	96075	J1772
100330	3415 8th Street NE		2		ChargePoint Network	100330	J1772
102534	1909 K St NWUS-29		2		ChargePoint Network	102534	J1772
104284	1100 15th St NW		2		ChargePoint Network	104284	J1772
105133	4300 Nebraska Ave NW		2		ChargePoint Network	105133	J1772
113646	10 Thomas Cir NW		18		Tesla Destination	113646	J1772 TESLA
113647	1011 L St NW		4		Tesla Destination	113647	J1772 TESLA
113650	1155 14th St NW		3		Tesla Destination	113650	J1772 TESLA
113651	1201 24th St NW		4		Tesla Destination	113651	J1772 TESLA
113652	1315 16th St NW		3		Tesla Destination	113652	J1772 TESLA
113653	1330 Maryland Ave SW		2		Tesla Destination	113653	TESLA
113654	1430 Rhode Island Ave		2		Tesla Destination	113654	J1772 TESLA
113655	15 E St NW		2		Tesla Destination	113655	J1772 TESLA
113656	1600 Rhode Island Ave NW		2		Tesla Destination	113656	TESLA
113657	1731 New Hampshire Ave NW		2		Tesla Destination	113657	J1772 TESLA
113658	2000 K St NW		1		Tesla Destination	113658	TESLA
113659	2015 Massachusetts Ave NW		4		Tesla Destination	113659	J1772 TESLA
113660	2112 8th St NW		1		Tesla Destination	113660	TESLA



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
113661	2117 E St NW		4		Tesla Destination	113661	J1772 TESLA
113662	2121 P St NW		2		Tesla Destination	113662	J1772 TESLA
113664	2500 Pennsylvania Ave NW		4		Tesla Destination	113664	TESLA
113665	2505 Wisconsin Ave NW		2		Tesla Destination	113665	J1772 TESLA
113666	2650 Virginia Ave NW		4		Tesla Destination	113666	TESLA
113667	2800 Pennsylvania Ave NW		2		Tesla Destination	113667	TESLA
113668	400 New Jersey Ave NW		4		Tesla Destination	113668	J1772 TESLA
113669	415 New Jersey Ave NW		4		Tesla Destination	113669	TESLA
113671	815 14th St NW		4		Tesla Destination	113671	J1772 TESLA
113672	900 10th St NW		3		Tesla Destination	113672	J1772 TESLA
113673	901 6th St NW		2		Tesla Destination	113673	J1772 TESLA
113674	901 Massachusetts Ave NW		3		Tesla Destination	113674	J1772 TESLA
113675	923 16th St NW		1		Tesla Destination	113675	TESLA
117189	1441 U St NW		2		ChargePoint Network	117189	J1772
121677	1351 C St NW		2		ChargePoint Network	121677	J1772
123243	1801 K St NW		1		EV Connect	123243	J1772
123244	2001 L St		1		EV Connect	123244	J1772
137149	901 K St NW		2		Non-Networked	137149	J1772
137150	901 K St NW		2		Tesla Destination	137150	TESLA
137167	1255 23rd St NW		4		Tesla Destination	137167	J1772 TESLA



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
137168	1615 L St NW		2		Tesla Destination	137168	J1772 TESLA
144129	3399 Benning Rd NE			2	Non-Networked	144129	CHADEMO J1772COMBO
148362	4200 Massachusetts Ave, NW		2		SemaCharge Network	148362	J1772
148372	2201 Wisconsin Ave NW		2		SemaCharge Network	148372	J1772
148379	1920 14th Street NW		1		SemaCharge Network	148379	J1772
148380	3307 M Street NW		1		SemaCharge Network	148380	J1772
148383	2350 Washington Place, NE.		3		SemaCharge Network	148383	J1772
148384	1625 Massachusetts Avenue NW		6		SemaCharge Network	148384	J1772
148385	1250 Connecticut Avenue, NW		1		SemaCharge Network	148385	J1772
148386	1225 19th Street Northwest		4		SemaCharge Network	148386	J1772
148387	1200 19th Street NW Suite 260		4		SemaCharge Network	148387	J1772
148389	1501 Rhode Island Avenue NW		1		SemaCharge Network	148389	J1772
148393	1200 17th Street, NW		2		SemaCharge Network	148393	J1772
148394	1920 L Street NW		1		SemaCharge Network	148394	J1772
148395	1900 L Street NW		1		SemaCharge Network	148395	J1772
148398	1020 19th Street NW		1		SemaCharge Network	148398	J1772
148399	1100 Connecticut Avenue NW		2		SemaCharge Network	148399	J1772



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
148401	1667 K Street Northwest		4		SemaCharge Network	148401	J1772
148408	1501 New York Avenue NE		2		SemaCharge Network	148408	J1772
148417	1331 F Street Northwest		4		SemaCharge Network	148417	J1772
148418	650 Massachusetts Ave NW		6		SemaCharge Network	148418	J1772
148422	1001 Pennsylvania Avenue NW		4		SemaCharge Network	148422	J1772
148424	10 G St, NE		1		SemaCharge Network	148424	J1772
148425	750 First St, NE		1		SemaCharge Network	148425	J1772
148426	401 9th St NW & D St NW		2		SemaCharge Network	148426	J1772
148427	122 C Street NW		1		SemaCharge Network	148427	J1772
148428	101 Constitution Avenue NW		2		SemaCharge Network	148428	J1772
148429	375 E Street Southwest		2		SemaCharge Network	148429	J1772
148430	355 E Street Southwest		2		SemaCharge Network	148430	J1772
148431	400 E Street Southwest		4		SemaCharge Network	148431	J1772
150290	2200 Pennsylvania Ave NW		3		SemaCharge Network	150290	J1772
150343	1900 N St NW		1		ChargePoint Network	150343	J1772
150369	1133 Connecticut Avenue NW		2		SemaCharge Network	150369	J1772
150370	1050 K Street Northwest		2		SemaCharge Network	150370	J1772
150490	1050 31st Street NW		2		Tesla Destination	150490	TESLA



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
150512	1050 31st St NW		3		Tesla Destination	150512	J1772 TESLA
150544	1501 New York Ave NE		3		Tesla Destination	150544	J1772 TESLA
150607	1152 15th St NW		1		Tesla Destination	150607	TESLA
150608	1875 K St NW		2		Tesla Destination	150608	TESLA
150609	1700 New York Ave		2		Tesla Destination	150609	J1772 TESLA
150799	616 E St NW		2		ChargePoint Network	150799	J1772
151272	1855 Wisconsin Ave NW		2		Volta	151272	J1772
152377	799 9th Street NW, Suite 102		6		SemaCharge Network	152377	J1772
152997	555 11th Street Northwest		2		SemaCharge Network	152997	J1772
154006	99 H St NW		2		ChargePoint Network	154006	J1772
154008	1270 4th St NE		2		ChargePoint Network	154008	J1772
154430	2700 F St NW		2		ChargePoint Network	154430	J1772
154661	1855 Wisconsin Ave NW			8	Tesla	154661	TESLA
155091	560 13th St NW		5		EV Connect	155091	J1772
155343	655 New York Ave.		1		ChargePoint Network	155343	J1772
163546	1201 Half St SE		2		ChargePoint Network	163546	J1772
163628	5929 Georgia Ave NW		1	3	Electrify America	163628	CHADEMO J1772COMBO
164012	4851 Massachusetts Ave NW		2		Volta	164012	J1772
164139	965 Florida Ave NW		2		Blink Network	164139	J1772
164718	1055 Thomas Jefferson St NW		1		Blink Network	164718	J1772



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
164765	20 M St. SE		1		Blink Network	164765	J1772
164774	600 H Street NE		1		Blink Network	164774	J1772
164777	500 L'Enfant Plaza SW		4		Blink Network	164777	J1772
165359	1050 17th Street Northwest		4		SemaCharge Network	165359	J1772
165585	Joint Base Anacostia- Bolling Chappie James Blvd.		6		OpConnect	165585	J1772
166968	2101 L Street		1		Blink Network	166968	J1772
167157	1900 Half St SW		2		ChargePoint Network	167157	J1772
167874	870 9th Street Northwest		22		SemaCharge Network	167874	J1772
167946	1345 Park Rd NW		2		Volta	167946	J1772
168255	1000 First St SE		2		ChargePoint Network	168255	J1772
168542	1155 F Street NW		3		Tesla Destination	168542	TESLA
168566	2001 K St NW		4		Tesla Destination	168566	TESLA
168882	1900 Pennsylvania Ave NW		4		Tesla Destination	168882	TESLA
169189	1111 23rd St		1		Tesla Destination	169189	TESLA
169198	3100 South Street NW		4		Tesla Destination	169198	J1772 TESLA
169256	2600 Virginia Avenue NW		8		Tesla Destination	169256	TESLA
169964	2438 Market Street NE			12	Tesla	169964	TESLA
170084	1535 Alabama Ave SE		2		Volta	170084	J1772
171486	300 H St NE		2		Volta	171486	J1772
171602	1300 19th St NW		2		ChargePoint Network	171602	J1772



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ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
171630	3000 K St NW		2		ChargePoint Network	171630	J1772
171849	79 Potomac Ave SE		2		ChargePoint Network	171849	J1772
171850	79 Potomac Ave SE		2		ChargePoint Network	171850	J1772
171851	79 Potomac Ave SE		2		ChargePoint Network	171851	J1772
173136	1255 22nd St NW		2		ChargePoint Network	173136	J1772
173137	1255 22nd St NW		2		ChargePoint Network	173137	J1772
173138	1255 22nd St NW		1		ChargePoint Network	173138	J1772
173405	1909 K St NW/ US-29		2		ChargePoint Network	173405	J1772
173481	1100 15th St NW		2		ChargePoint Network	173481	J1772
173482	1100 15th St NW		2		ChargePoint Network	173482	J1772
173483	1100 15th St NW		2		ChargePoint Network	173483	J1772
173484	1100 15th St NW		2		ChargePoint Network	173484	J1772
173485	1100 15th St NW		1		ChargePoint Network	173485	J1772
173486	1100 15th St NW		1		ChargePoint Network	173486	J1772
173487	1100 15th St NW		1		ChargePoint Network	173487	J1772
173488	1100 15th St NW		1		ChargePoint Network	173488	J1772
173489	1100 15th St NW		2		ChargePoint Network	173489	J1772
173490	1100 15th St NW		2		ChargePoint Network	173490	J1772
173983	1351 C St NW		2		ChargePoint Network	173983	J1772
174851	1900 N St NW		2		ChargePoint Network	174851	J1772



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
174852	1900 N St NW		2		ChargePoint Network	174852	J1772
174853	1900 N St NW		2		ChargePoint Network	174853	J1772
174854	1900 N St NW		2		ChargePoint Network	174854	J1772
174855	1900 N St NW		1		ChargePoint Network	174855	J1772
174856	1900 N St NW		2		ChargePoint Network	174856	J1772
175223	99 H St NW		2		ChargePoint Network	175223	J1772
175224	1270 4th St NE		2		ChargePoint Network	175224	J1772
175225	1270 4th St NE		2		ChargePoint Network	175225	J1772
175361	2700 F St NW		2		ChargePoint Network	175361	J1772
175362	2700 F St NW		2		ChargePoint Network	175362	J1772
175522	655 New York Ave.		1		ChargePoint Network	175522	J1772
175523	655 New York Ave.		1		ChargePoint Network	175523	J1772
175524	655 New York Ave.		2		ChargePoint Network	175524	J1772
175526	655 New York Ave.		2		ChargePoint Network	175526	J1772
181430	1900 Half St SW		2		ChargePoint Network	181430	J1772
181431	1900 Half St SW		2		ChargePoint Network	181431	J1772
181432	1900 Half St SW		2		ChargePoint Network	181432	J1772
181433	1900 Half St SW		2		ChargePoint Network	181433	J1772
181434	1900 Half St SW		2		ChargePoint Network	181434	J1772
182547	1270 4th St NE		2		ChargePoint Network	182547	J1772





ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
182565	1270 4th St NE		2		ChargePoint Network	182565	J1772
182570	1270 4th St NE		2		ChargePoint Network	182570	J1772
182577	1270 4th St NE		2		ChargePoint Network	182577	J1772
183438	1260 4th St NE		2		ChargePoint Network	183438	J1772
183439	1315 4th St NE		2		ChargePoint Network	183439	J1772
183440	1315 4th St NE		2		ChargePoint Network	183440	J1772
185639	395 E Street Southwest		1		SemaCharge Network	185639	J1772
185667	4801 Connecticut Avenue NW		4		SemaCharge Network	185667	J1772
186357	1501 M St NW		4		Non-Networked	186357	J1772
186631	901 G St. NW		2		ChargePoint Network	186631	J1772
187654	4400 Connecticut Ave NW		2		SemaCharge Network	187654	J1772
187776	69 Q Street, SW		1		Blink Network	187776	J1772
187896	1318 D St SW		2		ChargePoint Network	187896	J1772
187897	1318 D St SW		2		ChargePoint Network	187897	J1772
187947	3355a Benning Rd NE			1	ChargePoint Network	187947	CHADEMO J1772COMBO
188036	950 New York Avenue Northwest		2		SemaCharge Network	188036	J1772
189093	1101 Vermont Ave NW		1		Blink Network	189093	J1772
189704	1701 Rhode Island Avenue NW		2		SemaCharge Network	189704	J1772
189718	655 New York Ave.		2		ChargePoint Network	189718	J1772



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
189944	1425 K St NW		2		ChargePoint Network	189944	J1772
189945	1425 K St NW		2		ChargePoint Network	189945	J1772
190285	3 Tingey Square SE		1		Blink Network	190285	J1772
190858	2101 L Street		1		Blink Network	190858	J1772
190949	500 E Street Southwest		2		SemaCharge Network	190949	J1772
193096	1050 Connecticut Ave NW		1		Blink Network	193096	J1772
193388	230 Independence Ave SW		2		ChargePoint Network	193388	J1772
193734	230 Independence Ave SW		2		ChargePoint Network	193734	J1772
194612	1331 Maryland Avenue Southwest		12		SemaCharge Network	194612	J1772
194723	1000 Maine		11		SemaCharge Network	194723	J1772
194873	2000 M Street		2		SemaCharge Network	194873	J1772
194878	409 3rd Street Southwest		2		SemaCharge Network	194878	J1772
195022	1015 15th Street NW		2		SemaCharge Network	195022	J1772
195024	1400 K Street Northwest		4		SemaCharge Network	195024	J1772
195026	1400 Street NW		1		SemaCharge Network	195026	J1772
195027	600 13th Street N.W.		4		SemaCharge Network	195027	J1772
195028	45 L Street Northeast		2		SemaCharge Network	195028	J1772
195029	401 9th St NW & 875 D St NW		6		SemaCharge Network	195029	J1772



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR Types
195202	600 Massachusetts Avenue NW		9		SemaCharge Network	195202	J1772
195204	Chappie James Boulevard		8		SemaCharge Network	195204	J1772
195399	601 13th Street NW, Suite 300		2		SemaCharge Network	195399	J1772
195459	1400 Rock Creek Ford Road NW		2		SemaCharge Network	195459	J1772
195606	800 Maine Avenue Southwest		1		SemaCharge Network	195606	J1772
196045	1515 New York Avenue Northeast		3		SemaCharge Network	196045	J1772
196338	1200 K St. NW Suite 100		6		SemaCharge Network	196338	J1772
197398	1501 Harry Thomas Way NE		2		ChargePoint Network	197398	J1772
198036	1100 New York Avenue, NW		3		SemaCharge Network	198036	J1772
198037	1350 E Street Southeast		6		SemaCharge Network	198037	J1772
198567	870 9th St NW			7	EVgo Network	198567	CHADEMO J1772COMBO
198568	800 P St NW		1	2	EVgo Network	198568	CHADEMO J1772COMBO
198664	50 Massachusetts Ave NE			4	EVgo Network	198664	CHADEMO J1772COMBO
200471	202 Independence Ave SW		2		ChargePoint Network	200471	J1772
200736	1000 R St NW		1		ChargePoint Network	200736	J1772
200966	400/444 North Capitol Street NW		2		SemaCharge Network	200966	J1772
201791	1400 16th Street Northwest		2		SemaCharge Network	201791	J1772



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ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
202707	1801 Pennsylvania Avenue NW		1		SemaCharge Network	202707	J1772
202848	1625 Eckington PI NE		2		ChargePoint Network	202848	J1772
203002	1625 Eckington PI NE		2		ChargePoint Network	203002	J1772
203360	1335 Farragut street NW, DC		1		ChargePoint Network	203360	J1772
204739	600 New Hampshire Avenue NW		3		SemaCharge Network	204739	J1772
205001	1625 Eckington PI NE		2		ChargePoint Network	205001	J1772
205196	1275 K St NW		2		ChargePoint Network	205196	J1772
205456	1625 Eckington PI NE		2		ChargePoint Network	205456	J1772
205827	655 15th Street NW		8		SemaCharge Network	205827	J1772
206058	200 K Street NE		2		SemaCharge Network	206058	J1772
206062	701 Monroe St NE		2		ChargePoint Network	206062	J1772
206063	701 Monroe St NE		2		ChargePoint Network	206063	J1772
206402	7323 R 12th ST., NW		2		SemaCharge Network	206402	J1772
206617	3834 Alabama Ave SE		4		Volta	206617	J1772
206618	3834 Alabama Ave SE		2		Volta	206618	J1772
207933	655 New York Avenue Northwest		10		SemaCharge Network	207933	J1772
207936	1625 Eckington PI NE		2		ChargePoint Network	207936	J1772
212976	1650 Pennsylvania Avenue NW		2		ChargePoint Network	212976	J1772



ID	STREET ADDRESS	EV LEVEL 1 EVSE #	EV LEVEL 2 EVSE #	EV DC FAST COUNT	EV NETWORK	ID	EV CONNECTOR TYPES
213450	1275 New Jersey Avenue SE		6		SemaCharge Network	213450	J1772
213998	840 1st Street NE		2		Blink Network	213998	J1772
217129	901 F St. NW		2		SemaCharge Network	217129	J1772
218243	1771 N Street NW		2		SemaCharge Network	218243	J1772
	Total	19	654	39			