

# Electric Vehicle Charging Planning & Deployment

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# Electric Vehicle Charging, Planning & Deployment

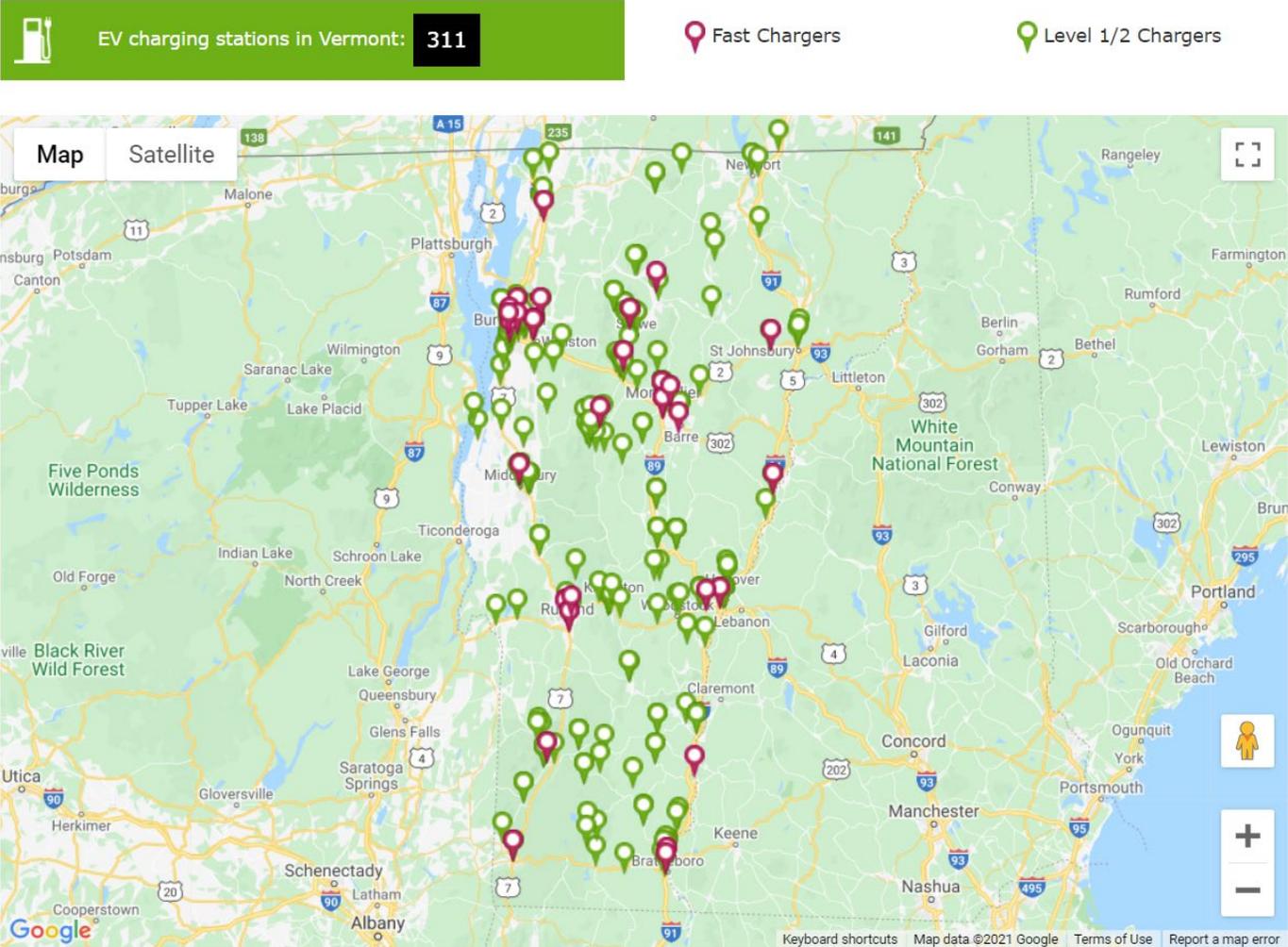
# Public EV Charging Network in Vermont

Vermont is #1

State has higher number of public chargers per capita than any other state in the U.S.\*

114 charging ports per 100,000 people

\*[Vermont — Highest Number Of Public Electric Vehicle Chargers Per Capita - CleanTechnica](#). U.S. Department of Energy, Alternative Fuels Data Center, [Alternative Fueling Station Locator](#). Data accessed November 17, 2020.



# Charging Equipment

## Level 1 Charging

120V

5 miles range / hr



J1772



Tesla

## Level 2 Charging

240V

10-20 miles / hr



J1772



Tesla

## DC Fast Charging

480V

Up to 1,000 miles / hr



CCS



CHAdeMO



Tesla

Plug Types →

# Legislative Goals for Level 3 Chargers\*

Act 55 (2021 Transportation Bill)

## Sec. 30. EVSE NETWORK IN VERMONT; REPORT OF ANNUAL MAP

(a) It shall be the goal of the State to have, as practicable, a level 3 EVSE charging port available to the public within:

(1) five miles of every exit of the Dwight D. Eisenhower National System of Interstate and Defense Highways within the State; and

(2) 50 miles of another level 3 EVSE charging port available to the public along a State highway, as defined in 19 V.S.A. § 1(20).

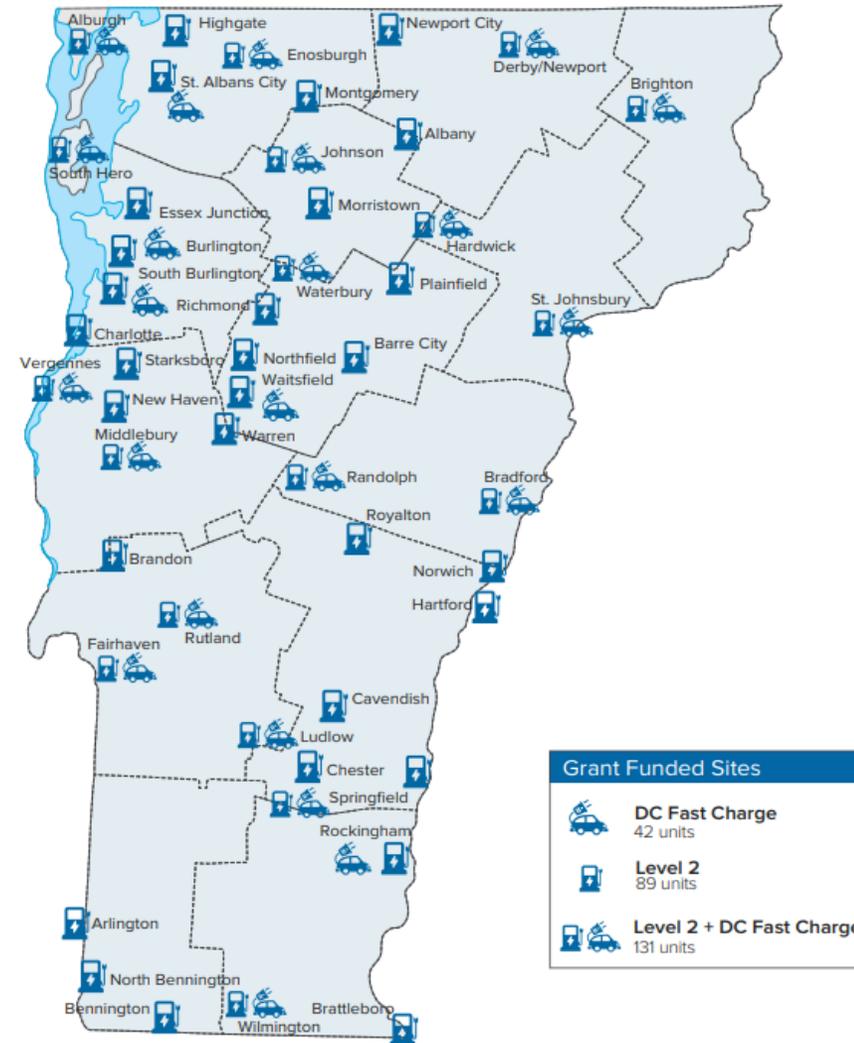
\*Level 3 is assumed to mean DC Fast Charger



# Funding Timeline

- 2014: DHCD and Dept of Environmental Conservation launch Electric Vehicle Supply Equipment (EVSE) Program with \$200k
- 2017: Volkswagen Settlement, \$2.8 million
- 2019: ~ \$1 million for 75 Level 2 + 5 DC Fast Chargers
- 2020: \$1.7 million to Blink for 11 locations
- 2021: \$750k to Norwich Technologies for 6 locations
- 2022-: \$1 million to residential charging for multiunit housing

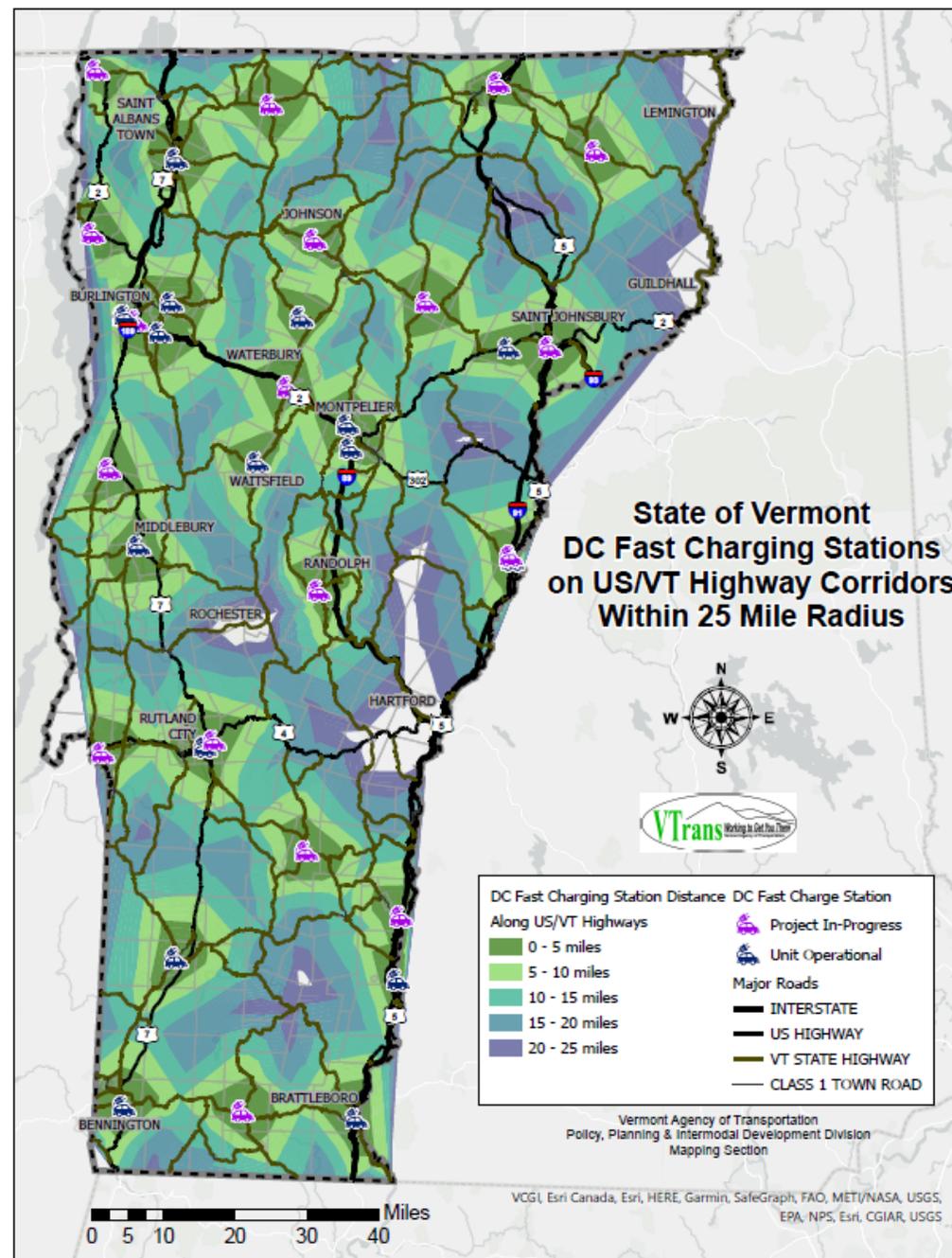
# Public Investments in Vermont



Department of Housing and Community Development: [Interactive map](#)

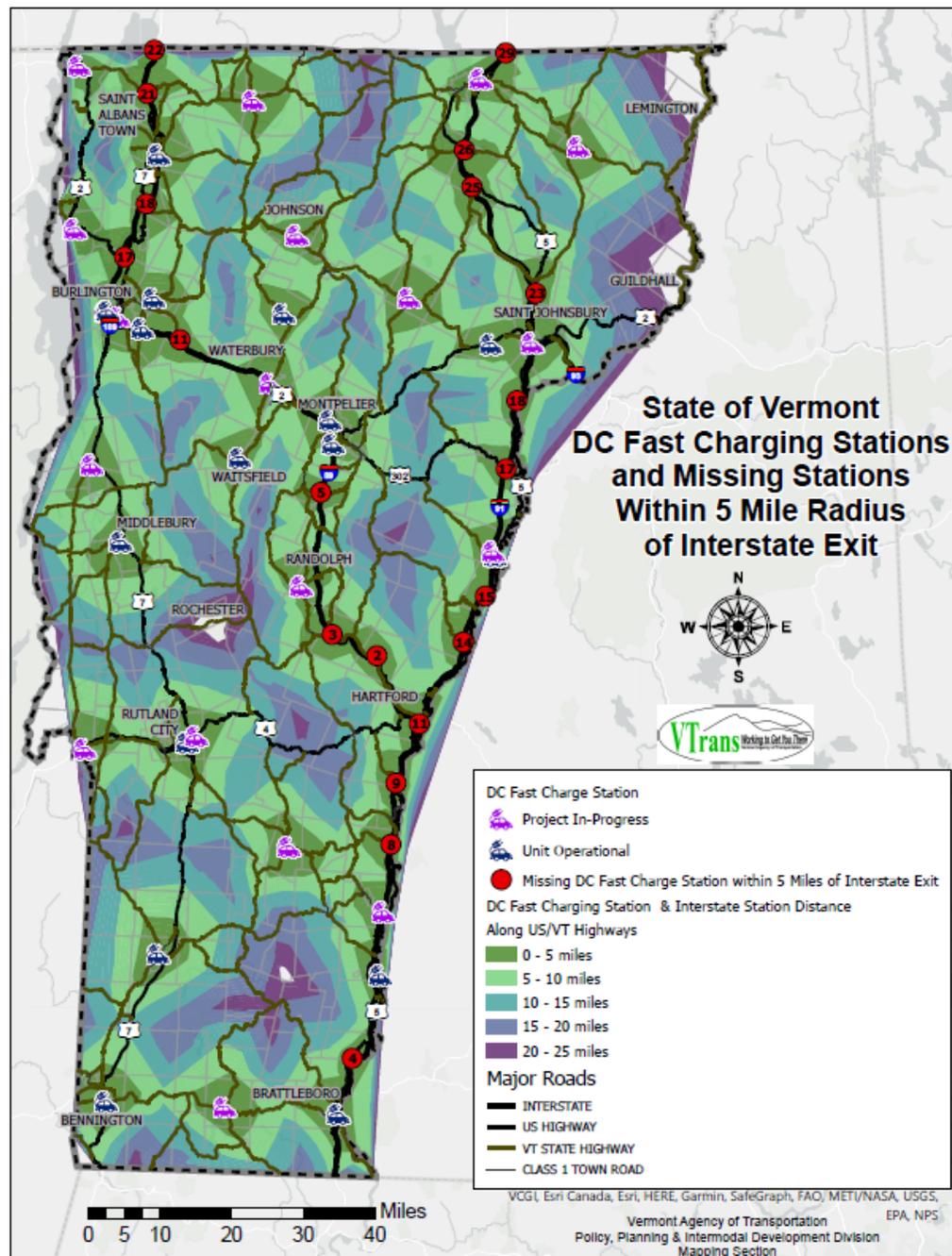
# Network analysis

- Level 3 Charger within 50 miles of the next charger on the state highway system
- Map shows existing and planned EV charging infrastructure with 25 mile radius
- Areas in white denote gaps in meeting state legislative goal
- Map does not consider border infrastructure, and excludes proprietary equipment like Tesla and dealership chargers



# Interstate Exits

- Level 3 Charger within 5 miles of each exit on the interstate
- Interstates I-91, I-89, I-93
- 22 Exits lack a public DC fast charger within 5 mile radius
- Map demonstrates how investing in about 30 locations will allow Vermont to meet both goals



# Statewide EV Charging Plan

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Funded through Multi-pronged Vehicle Electrification Strategy (MUVES) agreement between VTrans and Drive Electric Vermont/VEIC

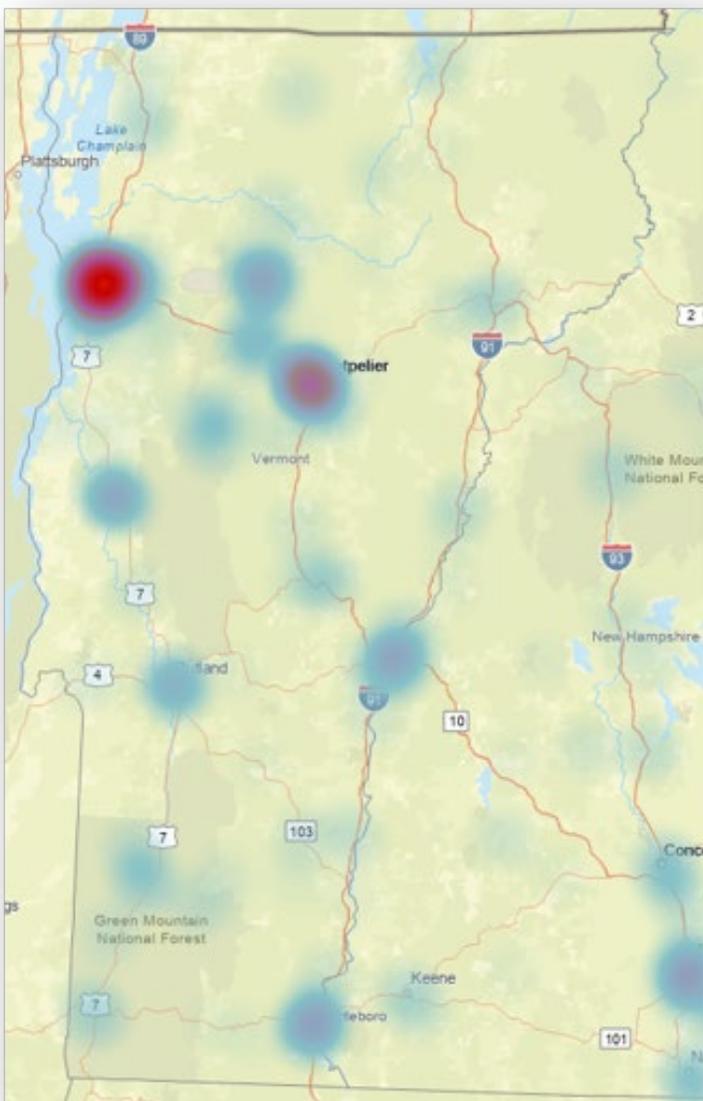
Supported through EVSE (Electric Vehicle Supply Equipment) Interagency Workgroup: Agency of Transportation, Department of Housing and Community Development, Department of Environmental Conservation, Public Service Department

Ten (10)-year plan to be updated every three (3) years to:

1. Guide significant public investments in the near term
2. Support Vermont's climate action and energy goals
3. Coordinate Agency action with public and private partners



# EV Charging Plan Considerations



- Contextualize planning and deployment work
- Estimate infrastructure needed to accelerate EV adoption
- Support 2021 Transportation Bill goals
- Build upon prior efforts and partnerships with the private sector and utilities
- Understand existing barriers to implementation and solutions

Appendix 5

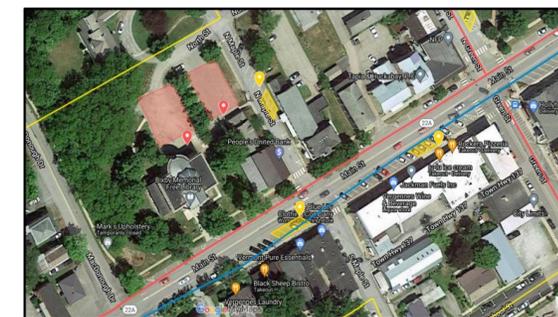


## Vergennes

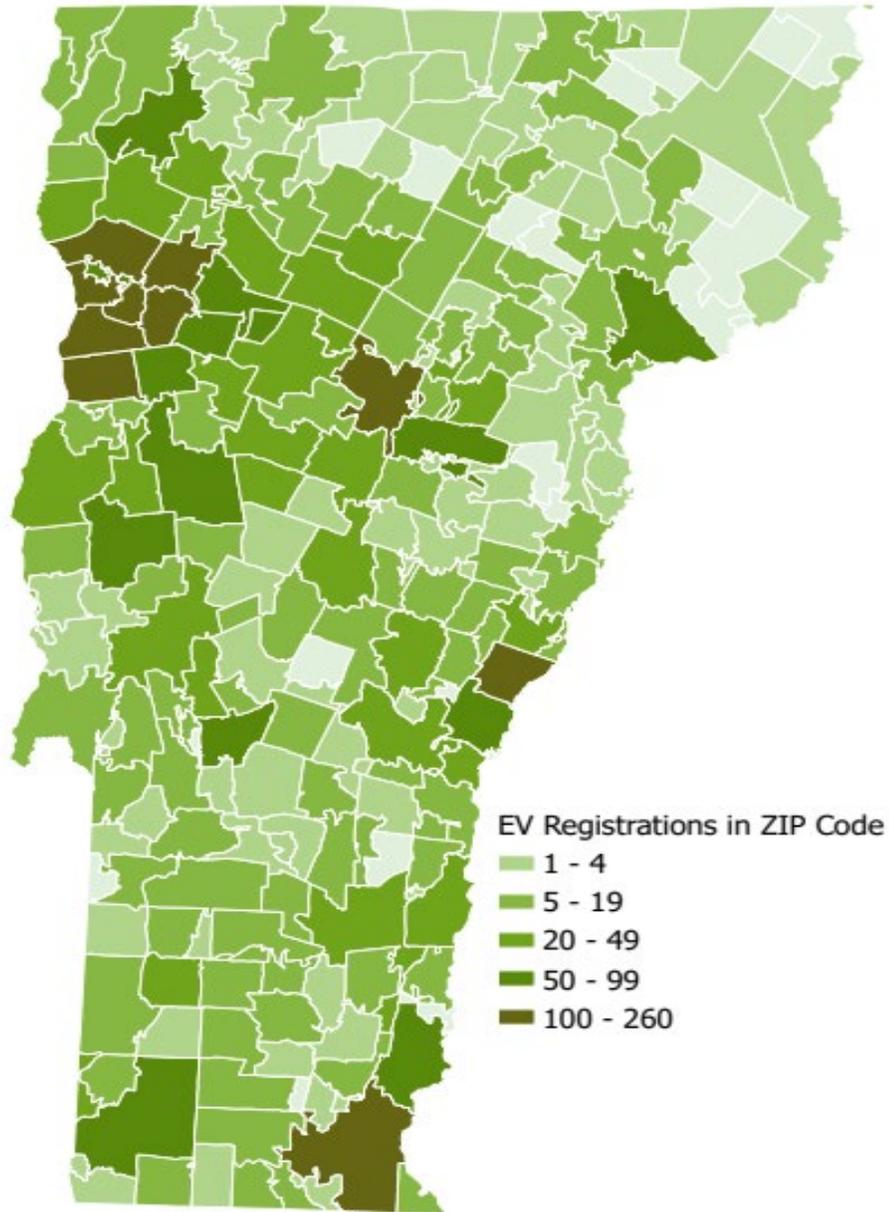
### Primary Location

The proposed primary locations are two parking lots located at the end of North Street. The Parking Lots are behind the Bixby Memorial Library and People's United Bank. The street addresses for these buildings are 258 Main Street and 3 North Maple Street.

### Overhead and Street View Images



# EV Charging Plan Considerations



- Strike strategic balance of corridor and community charging (where majority of charging is expected)
- Prepare for federal funding opportunities—formula funding and competitive grant programs, and alternative fuel corridor designation
- Anticipate new trends, technologies, policies and their impacts
- Prioritize areas across the state to help ensure equitable distribution and mutually reinforce other state investments

# Infrastructure Investment and Jobs Act

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- \$21 million to Vermont over five (5) years for EV Charging
- Competitive grants for both corridor and community charging—with priority to rural areas, low- and moderate-income neighborhoods, and communities with low levels of private parking
- Carbon Reduction Funding
- 6<sup>th</sup> Round of Alternative Fuel Corridor Nominations
- US DOT & US DOE issued RFI for Buy America requirements and general program guidance



# Contacts

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