#### Nicole Murati Ferrer Chairperson

Mark Melo
City Electrician

#### POLE AND CONDUIT COMMISSION

**CITY OF CAMBRIDGE** 

831 Massachusetts Avenue, Cambridge, Massachusetts 02139

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Terrence James Shea
Superintendent of Streets

#### POLE AND CONDUIT COMMISSION MEETING AGENDA Thursday, May 19, 2022, at 10:00 A.M.

This meeting was held remotely in accordance with Section 20 of Chapter 20 of the Acts of 2021, signed into law on June 16, 2021. Meeting started at approximately 10:02 a.m.

Commission Members (All Present): Nicole Murati Ferrer, Mark Melo, and Terrence James Shea.

**License Commission Staff Present:** Dana Clarke, Administrative Assistant.

**Advisor:** Stephen Lenkauskas, Retired City Electrician.

**Documents Considered by the Board:** As to all petitions, the Commission considered the application submitted to it and all documents attached thereto.

**Decisions:** All votes, unless otherwise stated, were taken by roll call vote and were 3-0, unless otherwise indicated. When matters are granted with "typical conditions," those are:

- (1) Must obtain Electrical Department Utility Permit and Department of Public Works ("DPW") Permits and comply with the provisions therein.
- (2) Must pay sidewalk preservation off-set fee.
- (3) Must coordinate site visit with DPW.
- (4) Must commence work within sixty (60) days of the grant and complete within six (6) months of the date of the approval.
- (5) Must comply with any amendment City agencies make to the issued permits after the Acceptance Without Reservations is filed.

Matters 1 & 2 (Petitions 174200 and 174205) were called together.

- 1. New Petition (174200) Department of Public Works, 147 Hampshire Street, Cambridge, MA 02139, for the following: Pacific Street Installation of 1" PVC conduit from existing electrical cabinet to proposed EV charger. One sidewalk panel affected.
- 2. New Petition (174205) Department of Public Works, 147 Hampshire Street, Cambridge, MA 02139, for the following: Broadway Installation of 1" PVC conduit from existing electrical cabinet to proposed EV charger. One sidewalk panel to be removed and replaced.

**Present:** Penny Antonoglou, Kathy Watkins, and Irina Sidorenko.

**Summary:** Presentation was emailed to the Board regarding the City's effort to increase the number of electric charging vehicle stations in the City (presentation attached to minutes). This is part of the City's effort to be carbon neutral by 2050. Cities like Boston and New York are doing this too and this would be a supplement to the stations already in City owned parking lots. The proposed locations would be on Tudor Street and Norfolk Street. There was no objection as to the proposal but the Commission expressed some issues/matters that need to be resolved prior to approval of any such

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grant. Specifically, there needs to be a discussion with the Disability's Commission to ensure that the proposal is not adversely affecting the path on the sidewalk. That there is ADA compliance as to the actual station. As to the specs, there needs to be a 2 inch with a 30 inch cover and encased with concrete. There may be additional permits required from ISD and electrical since a higher voltage, 220, is required. There needs to be bollards placed to protect the equipment from that used to clear the snow on sidewalk. The Norfolk one would also need an 8M permit.

**Decision:** Continue (2-1, Commissioner Shea voted to grant).

3. Continuation from April 28, 2022, for further review and common trench letter. (170947) Comcast, 426 E. First Street, Boston, MA 02127, for the following: Main Street - At the intersection of Main Street and Albany Street, place (1) new 4'x4'x4' Comcast manhole over existing comcast conduit on Albany Street. From newly placed manhole, trench and install (2) 4" PVC conduits 139' westerly on Albany Street to the property line of 600 Main Street.

Present: Comcast, Anthony Vatalaro and Bill Conway

**Summary:** The common trench letter was sent and there were no takers. The conduit work will be within the construction site. Verizon is going in this area as well. The project manager has been in constant coordination with the contractor and no issues.

**Decision:** Granted with typical conditions and further coordination with the contractor.

**4.** New Petition (174085) Comcast, 426 E. First Street, Boston, MA 02127, for the following: Jay Street - Starting at utility pole #18 on Jay Street, trench and install (1) 2" PVC conduit 41' easterly to the property line of **50 Jay Street** ending in a Comcast vault on the private property. the work will include the removal and replacement of (1) sidewalk panel.

**Present:** Anthony Vatalaro and Bill Conway.

**Summary:** Developer going from aerial to underground, adding a house. This is similar to the Eversource petitions that are going in reverse – Comcast must notify all other attachees, this is going right through tree pit and an Eversource manhole.

**Decision:** Granted with typical conditions and the additional conditions that: coordination with the City arborist; and at least the current attachees are notified through common trench letter.

5. New Petition (172884) <u>Cambridge Network Solutions, 35 McGrath Highway, Somerville, MA 02143,</u> for the following: Main Street - Install 228' of (4) 1 ½ conduits from P. N/A in the intersection of Front Street and Windsor Street to the communications manhole in front of 223 Massachusetts Avenue through the roadway.

Present: Jeff Harrington and Mark Pavone.

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**Summary:** This is to provide service to 750 Main Street. There is a lot of coordination with builder, use existing conduit from building to the pole at corner. Comcast is allowing the use of the pipe, utility license to attach to the 3 poles. Also tying in with CNS. The pipes will be smaller to allow manipulation of installation since there is so many utilities in the area. Common trench letter was sent, and no responses received – the four are okay and meet the 25% vacant for future leasing. Manhole is the one that extends. The route chosen is due to the issue that the network at Albany is down and then broke out on Massachusetts and down Lansdowne; they tried to keep it as close to the site but have nothing on the northeast side. Still waiting for the utilities and licenses still needed.

**Decision:** Continue.

6. New Petition (172894) <u>Cambridge Network Solutions, 35 McGrath Highway, Somerville, MA 02143</u>, for the following: Cambridgepark Drive - Install a new 3x3 Communications conduit in the roadway on the corner of Cambridgepark Drive and Steel Place. Install a new 3x3 Communications conduit in the roadway on Steel Place in front of 35 Cambridge Park Drive. Install (1) Schedule 40 PVC conduit from existing Verizon Manhole 26/595 on Cambridge Park Drive to the existing MFS manhole in the intersection of Steel Place and Alewife Station Access Road.

**Present:** Jeff Harrington and Mark Pavone.

**Summary:** This is put in to fill a gap in coverage. They attempted to license conduit from other providers but not enough so they need to install a new one. Need to service Cambridgepark Dr. Received manhole breakdown license – this would connect to Level 3 system – new service on Cambridgepark Dr. A City conduit to that route needed. This is a newly paved roadway so it would require curb to curb. There are MWRA lines in the area and need to find out if 8M permit required. There is a lot of pressure to get this work done, they already have one service order. They need to perform test pits and have MBTA coordination.

**Decision:** Granted with typical conditions and additional conditions that there need to be two additional conduits installed, curb to curb and road pavement, 8M MWRA permit, test pits, and coordination with MBTA.

7. New Petition (174126) Crown Castle NG East, 1800 West Park Drive, Marlborough, MA 01581, for the following: Main Street – This is an equipment upgrade from a 24"h x 14" width antenna, with a 60 x 14 x 8.5 cabinet to a 24"h x 14" width antenna, with a 70.1h x 22.7 w, 21.5 d, with one 19.4 x 9.6 x 6.9 5G antenna (associated with VP 140548).

**Present:** Bryn Thornburgh.

**Summary:** This is an upgrade to an existing small cell. It would consist upgrading cabinet to a 7 inch by 27 by 21 and adding one antenna. They are looking for waiver on the cabinet size as site is to be upgraded. In addition, the petitioner is seeking feedback on the 5G antenna and design as the siting requirements do not perfectly match the Commission's policy.

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This petition indicates that the addition of the 5G antenna is very close to the windows of the residence. Petitioner stated the photo simulations make it appear closer than what it is but could not specify the distance and actual measurement. The cabinet size may not be an issue since the Commission's intent is to have co-location when possible and that may require a larger cabinet.

**Decision:** Continue to get measurement and also legal opinion on the waiver of the policy.

8. New Petition (174097) Harvard University, 1350 Massachusetts Ave, Cambridge, MA 02138, for the following: Church Street - Pulling feeders from 26 Church Street to 32 Church Street across Palmer Street. This is a temporary 3-month 100A messenger cable system.

**Present:** Christopher Davis, Sarah E. Henning, Kathy McCarthy and Steven Dodge.

**Summary:** Location, sound, and life safety components, and support. 20 Church Street and attaching to a dead conduit and then going into basement. Making electrical connections and having the service that they need. Overhead – as long as ISD electrical approves installation, crossing public way with aerial everything else with ISD. Expected duration -3 months for switch gear head. This work is all aerial.

**Decision:** Granted pending approval of ISD electrical.

9. Continuation from February 17, 2022, to review new design/route. (161285) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Fulkerson Street - Easterly from pole P509/18, approximately 100 feet north of Charles Street, to private property at #259 Charles Street, install approximately 10 feet of conduit (WO#7553909).

**Present:** Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** A new plan was submitted with conduit coming off pole 130. This pole to rise up will need to be replaced before any new attachments and remove the old pole. The current pole is to be replaced since the top got struck by lighting.

**Decision:** Granted with typical conditions and additional condition that a new pole needs to be installed and no new attachments until the old pole removed

**10.** New Petition (173663) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Charles Street - Cathodic protection of natural gas pipeline to include Anodes to be installed 30'-40' deed with minimum hole diameter of 3", spaced 10' and connected with #8 AWG Anode Cables Warning Tape. Includes power source drop to Rectifier Cabinet and AC Power Cabinet.

**Summary/Decision:** Not heard as applicant failed to notify abutters.

11. Continuation from April 28, 2022, for further review and coordination. (169270) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Maple Avenue - Easterly from manhole

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MHC868, at the intersection of **Broadway and Maple Avenue**, install approximately 39 feet of conduit and one new manhole MHC31491.

**Present:** Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** A site meeting requested and reviewed. Need to maintain 3 foot separation from the City water main.

**Decision:** Granted with typical conditions and additional condition that need to maintain 3 foot separation from the City water main line.

12. Continuation from April 28, 2022, for further review and coordination. (169277) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Cambridge Street - Northerly from manhole MHC114, at the intersection of Harding Street, install approximately 33 feet of conduit and one new manhole MHC31490 (WO#6726563).

Present: Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** A site meeting requested and reviewed. In front of King School – DPW is requesting revised plan their manhole between 24 and water line. In addition, this work would need to be performed during summer when school is not in session.

**Decision:** Continue.

**13.** Continuation from April 28, 2022, for further review and coordination. (169811) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Main Street - Northerly from manhole MHC2909, south of **Broad Canal Way**, install approximately 19 feet of conduit and one new manhole MHC31493 (WO#6726597).

**Present:** Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** A site meeting was conducted. No issue other than to make note that there needs to be coordination with the work being performed at 200 Main Street.

**Decision:** Granted with typical conditions and additional condition that there be coordination with the work being performed at 200 Main Street.

**14. Continuation from April 28, 2022, for further review and coordination. (169834)** Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Beech Street - Southeasterly from manhole MHC2800, at the intersection of Massachusetts Avenue and Beech Street, install approximately 21 feet of conduit and one new manhole MHC31488 (WO#6726515).

Present: Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

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**Summary:** A site meeting was conducted. There is a lot going on with MBTA and its large duct bank area. In addition, this is a newly paved area. There is too much already at the proposed site. The petitioner will need to look for a different route/location and submit a new plan/petition.

**Decision:** Denied.

**15.** Continuation from April 28, 2022, for further review and coordination. (169838) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Cambridge Street - Northerly thence westerly from manhole MHC834, approximately 85 feet west of **Highland Avenue**, install approximately 34 feet of conduit and one new manhole MHC31487 (WO#6726480).

Present: Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** A site meeting was conducted. There are no issues but curb to curb restoration and coordination with the hospital will be required.

**Decision:** Granted with typical conditions and additional conditions that there be curb to curb restoration and coordination with the hospital.

16. Continuation from April 28, 2022, for further review and coordination. (169844) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Garden Street - Northerly from manhole MHC990, approximately 180 feet west of Massachusetts Avenue, install approximately 15 feet of conduit and one new manhole MHC31492 (WO#6726590).

Present: Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** A site meeting was conducted. No issues regarding overlay and curb to curb restoration.

**Decision:** Granted with typical conditions and additional conditions that there be overlay and curb to curb restoration.

17. Continuation from April 28, 2022, for redesign. (170113) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Binney Street - Southwesterly from manhole MHC3116, at the intersection of Galileo Galilei Way, to private property at #322-346 Binney Street, install approximately 4 feet of conduit (WO#6401780).

Present: Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** There was insufficient time to review the new design plans.

**Decision:** Continued.

18. Continuation from April 28, 2022, for further review. (171049) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Vassar Street - Northeasterly at the intersection of

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**Amesbury Street**, install approximately 551 feet of conduit and one new manhole MHC31510. Southwesterly from manhole MHC28577, approximately 419 feet northeast of **Amherst Alley**, install approximately 58 feet of conduit. Northerly from manhole MHC28577, approximately 419 feet northeast of **Amherst Alley**, install approximately 48 feet of conduit (WO#7259726).

Present: Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** This was continued to do overlay of the distribution plan to show that they do not interfere with each other. It has been confirmed there are no issues.

**Decision:** Granted with typical conditions.

19. New Petition (173690) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Ellery Street - Southeasterly from pole P227/5, approximately 218 feet northeasterly from Massachusetts Avenue to private property at #8 Ellery Street, install approximately 9 feet of conduit (WO#7950491).

Present: Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** This is a new service upgrade for 200 amp for #8 Ellery. Permanent sidewalk repair. Common trench letter and also contractor already installed conduit and will need public utilities and further coordination.

**Decision:** Continue for common trench letter and further coordination with utilities and contractor.

**20.** New Petition (174104) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Pearl Street - Southerly from pole P538/62, approximately 30 feet easterly of Glenwood Avenue, to private property at #334 Pearl Street, install approximately 10 feet of conduit (WO#7950596).

**Present:** Susan Barroso, Hannah Cooper, and Kelly-Ann Correia. Doug Casazza, Kim Walker-Chin residents. Bob Purdy, builder.

**Summary:** This relates to 334, 336, and 338 - 200 amp service upgrade. There is confusion as to the plan overhead that feeds front building and something going on with another meter in the back, one overhead and one underground – 334-336 have overhead, 338 will have underground. The overhead will remain. There is a question as to why 4 inch rather than 3 inch. The issue is also that the conduit has already been installed (as in the previous petition).

Electrician for site explained they get the instructions from Eversource and they install it. Eversource does not tell them they have to wait until it gets the grant of location. They ran underground cable 80 feet without a utility permit. Eversource explains it files the plan and customer installs but it should not be until it gets a grant of location. It is clear Eversource is not clearly communicating with the customers. ISD did go to the site.

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**Decision:** Continue.

**21.** New Petition (174181) Eversource Energy, 101 Linwood Street, Somerville, MA 02143, for the following: Broadway - Easterly from manhole MHC862, at the intersection of Ellery Street, install approximately 10 feet of conduit. Ellery Street - Southerly from the intersection of Broadway, install approximately 10 feet of conduit and one new manhole, MHC31498 (WO#6726552).

Present: Susan Barroso, Hannah Cooper, and Kelly-Ann Correia.

**Summary:** Set a light of manhole and do an improvement – permanent repair on pedestrian ramp and mill overlay.

**Decision:** Granted with typical conditions and additional conditions to do a permanent repair on pedestrian ramp and mill overlay.

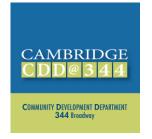
22. Consideration of Meeting Minutes January 20, 2022, March 17, 2022, and April 28, 2022.

NMF\_\_\_\_\_ Minutes Approved: June 16, 2022

MM\_\_\_\_\_ MM/\_\_\_ Minutes Posted: June 16, 2022

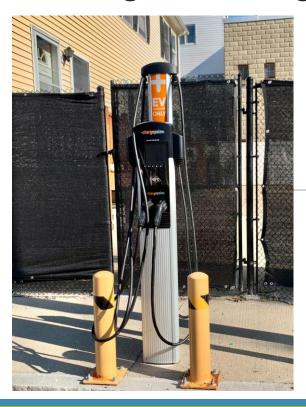
# CITY OF CAMBRIDGE





#### ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

Planning for EV Chargers in Cambridge











#### Welcome!

- 1. Background: Why Electric Vehicle Charging?
- 2. Efforts to Date
- 3. Pilot Program:
  - Tudor St
  - Norfolk St
  - Pemberton St
  - Upland Rd
- 4. Next Steps



## **Electric Vehicles (EV)**

- Hybrid (HEV): Utilize both gasoline and rechargeable batteries
- Plug-In Hybrid (PHEV): Utilize both gasoline and plug-in rechargeable batteries
- All Electric (BEV): Utilize plug-in rechargeable batteries only



Toyota Prius, Honda Insight Late 1990s – early 2000s



35 Make & Models available today from Ford to Ferrari



Many makes / models available, from Hyundai to Tesla



# **Electric Vehicle Supply Equipment (EVSE)**

- AKA Charging Stations are required to keep electric vehicle batteries charged
- Three types of chargers

Charger Type	Volts	Full Charge Time	Primary Uses
LEVEL 1	120V	12+ hours	Private residential in driveway
LEVEL 2	240V	3+ hours	Municipal and Private Parking Lots/Garages, Workplaces
LEVEL 3 DCFC (Direct Current Fast Charging)	400 - 900V	30 minutes	Institutional, Fleet

**Pilot Program** 



# **Electric Vehicle Supply Equipment (EVSE)**

- Two main types of chargers:
  - Curbside Ground-Mounted (pilot program focus)
  - Curbside Pole-Mounted (future possibility)



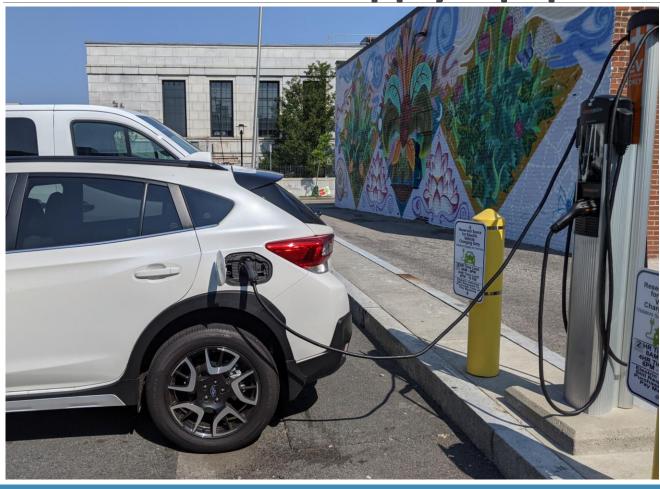
Ground Mounted



Pole Mounted



**Electric Vehicle Supply Equipment (EVSE)** 



An electric vehicle being charged in Municipal Lot 8 at the corner of Green St and Pleasant St in Central Square



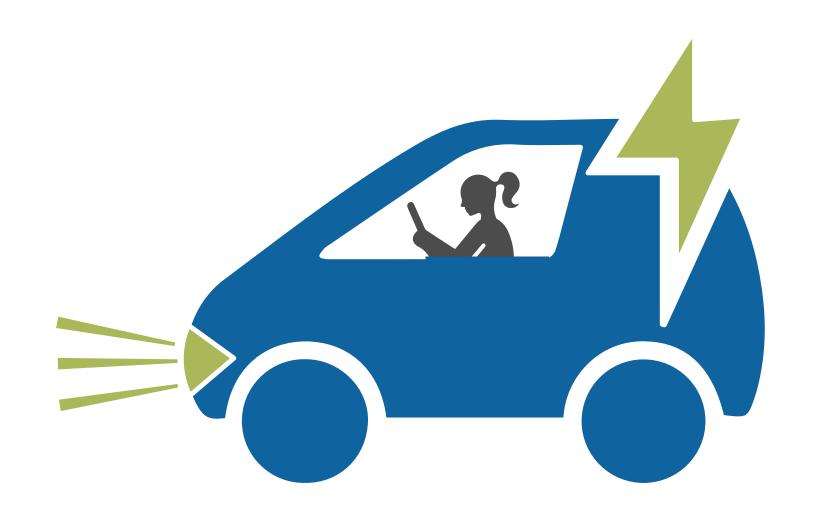
#### **Transportation Fuel Transition**

- Transition underway from fossil fuel-powered motor vehicles to electric vehicles
- State mandate to move to all EV car sales by 2035
- In March 2021: 122,000 EVs sold, setting monthly US record
- Transition driven by
  - Environmental concerns / Local air quality
  - Lower cost to own and operate
  - State and federal incentives (see Cambridgema.gov/ElectricVehicles for more information on incentives)



## **City Role**

- Goal to be carbon neutral by 2050
- City has installed charging infrastructure on public property to support the adoption of EV
- Help break down barriers to EV adoption
  - Many households do not have access to a driveway
- Pilot program to install four EV chargers on residential streets

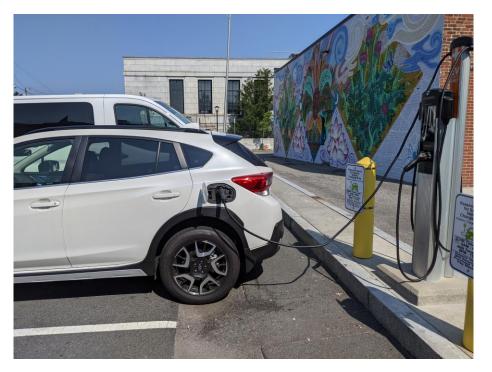


# CITY EFFORTS TO DATE

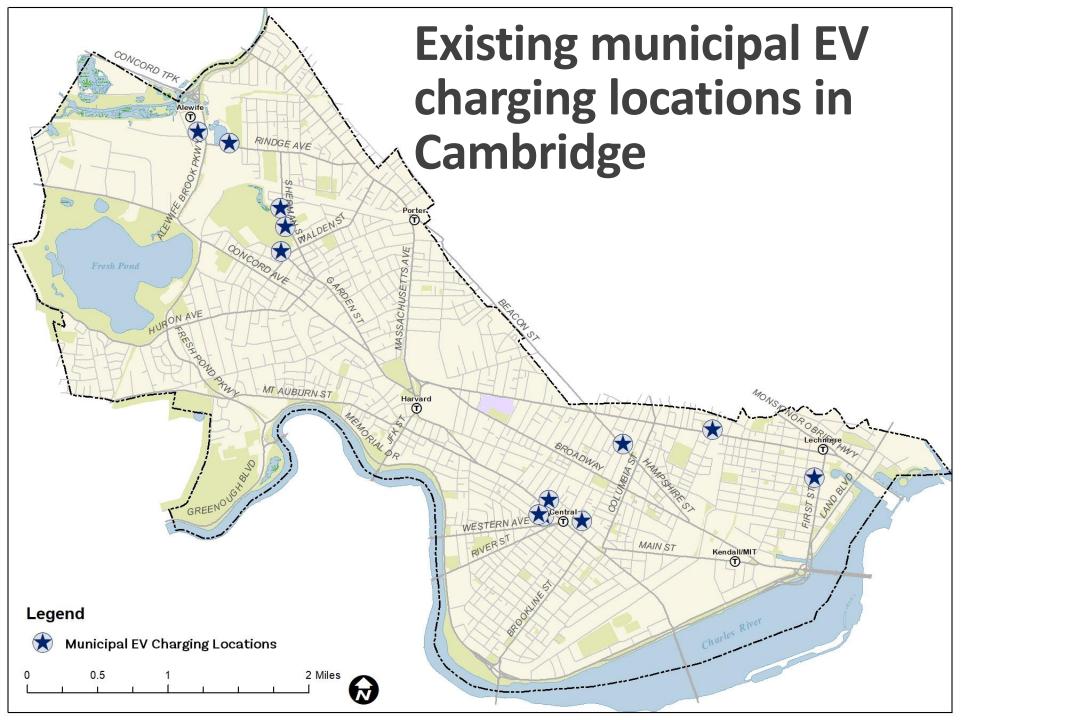


### **EV Charging Locations in Cambridge**

- The City has installed 17 charging stations (capacity of 31 vehicles)
- Most are dual-head chargers
- Located at a variety of municipal parking lots and facilities
- Many publicly accessible EV chargers in private lots

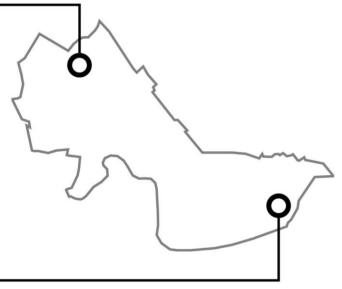


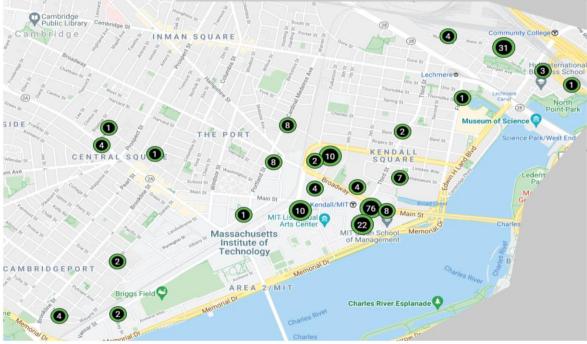
Lot 8 EV Charger



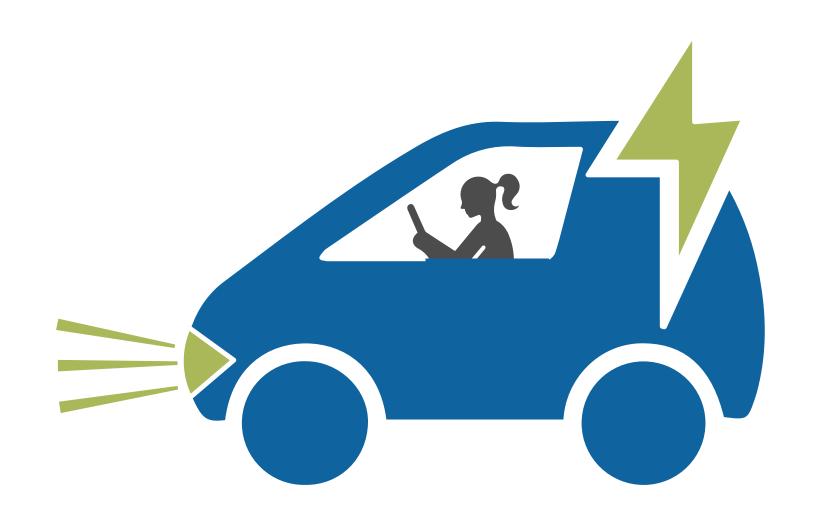
# Alewife Brook Reservation Central Rock Gym HIGHLANDS

# Publicly accessible EV charging stations





https://na.chargepoint.com/charge\_point



# PILOT PROGRAM



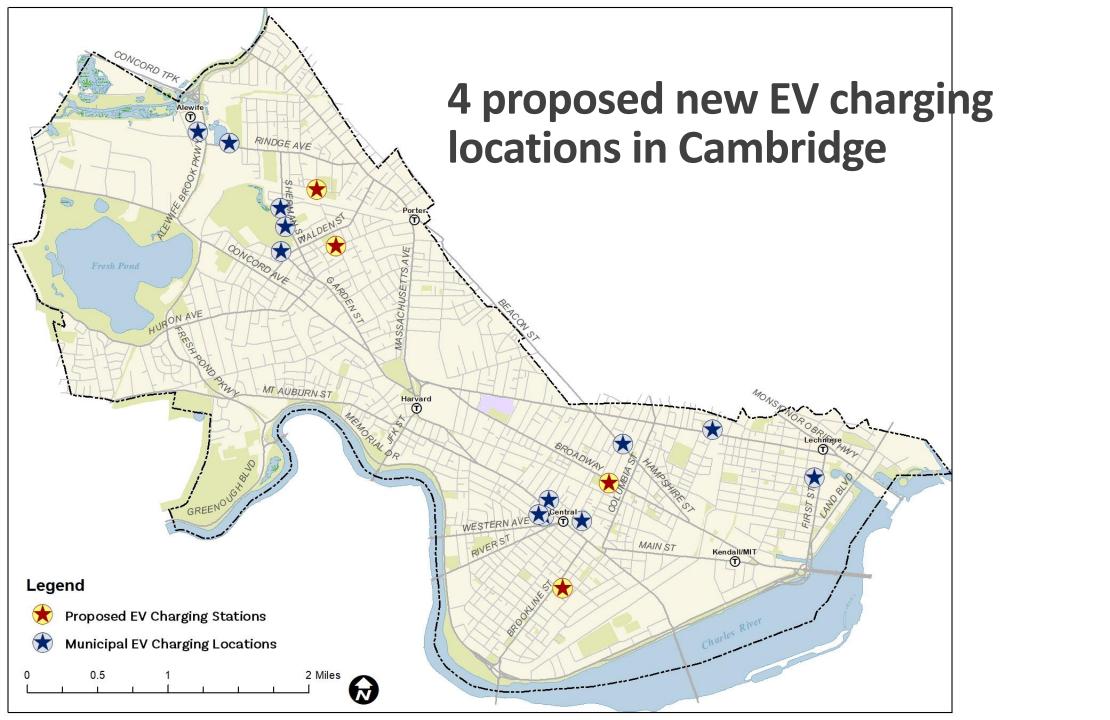
## **Locating EV Chargers**

- Pilot is to install chargers at four locations in primarily residential areas
- Locations focus on residents without driveways
- Using existing electric boxes in nearby parks
- Spreading out locations within the city



### Who Can Use EV Chargers?

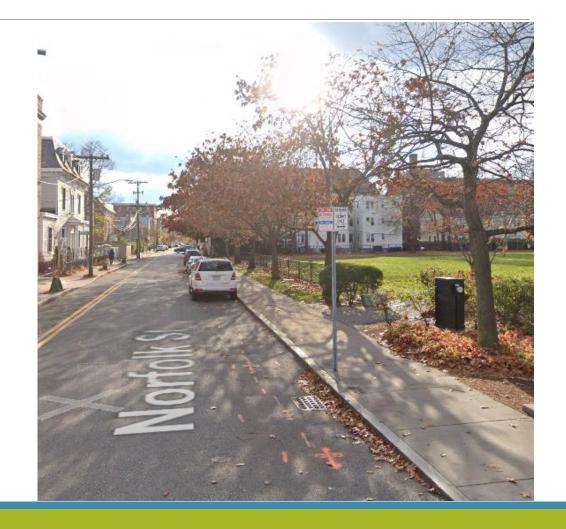
- Pilot charging spots will be in residential permit zones and open to all Cambridge permit and visitor pass holders
- Cost will be \$0.189 per kWh drawn, plus \$0.15 per hour
  - ~\$10 for a full charge depending on the car
- Regulations requiring active charging promulgated by Traffic Director





#### **Pilot Location: The Port**

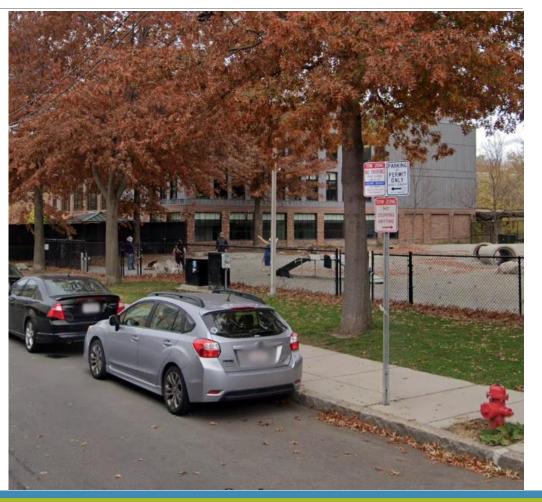
- Norfolk Street
  - Between Harvard Street and Broadway
  - Level 2 charger for 2 vehicles at a time
  - Residential permit parking regulation remains





#### **Pilot Location: Cambridgeport**

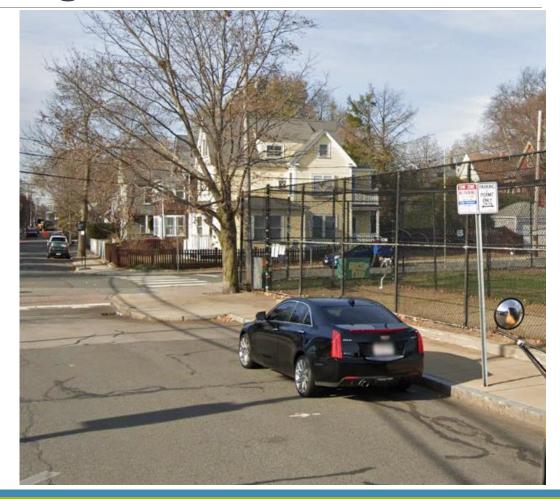
- Tudor Street
  - Between Sidney Street and Brookline Street
  - Level 2 charger for 2 vehicles at a time
  - Residential permit parking regulation remains





## **Pilot Location: North Cambridge**

- Pemberton Street
  - Between Yerxa Road and Haskell Street
  - Level 2 charger for 2 vehicles at a time
  - Residential permit parking regulation remains





#### **Pilot Locations: Neighborhood Nine**

- Upland Road
  - Between Newell Street an Raymond Street
  - Level 2 charger for 2 vehicles at a time
  - Residential permit parking regulation remains





#### **Pilot Locations: similar installations**

#### Curbside Electric Vehicle Charging Now Available in New York City

July 7, 2021



#### **NYC 2050 Carbon Neutral**

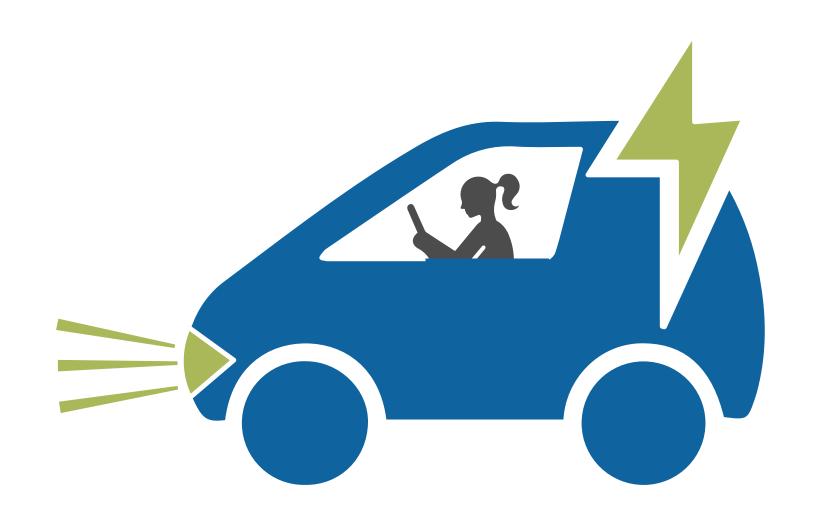
20% of public spaces EV by 2030 & 40% by 2040 Currently have 92 on-street locations



Goal of every household being within a 10 min walk of a public EV charging station or EV car share.





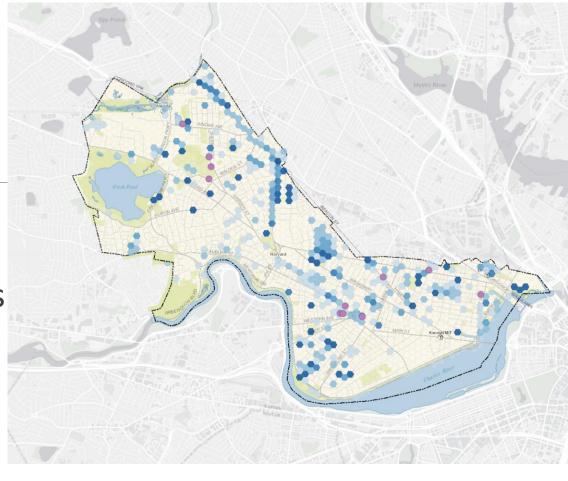


# NEXT STEPS



#### **Future EV Planning**

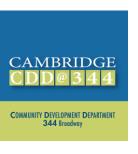
- Draft ordinance requiring new development to include 25% of parking spaces with Level 2 chargers and all other parking spaces to be EV-ready
- Incorporate EV chargers into major projects (River St, Central Square)
- Spring 2023: 6-8 additional EV charging stations in residential neighborhoods



On-line tool for people to identify locations for EV charging. 470 votes at 176 unique locations.







#### COMMUNITY DEVELOPMENT DEPARTMENT

#### Susanne Rasmussen

Dir. Environment and Transportation Planning

#### **Bill Deignan**

Transportation Program Manager

**Charlie Creagh** 

Senior Transportation Planner

PUBLIC WORKS DEPARTMENT

Kathy Watkins

City Engineer

**Penny Antonoglou** 

Senior Engineer

TRAFFIC, PARKING AND TRANSPORTATION

Brooke McKenna

Assistant Director for Street Management