

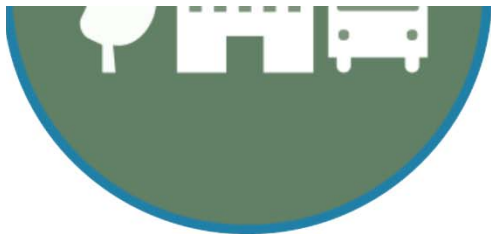


Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

Operational Planning &
Infrastructure Committee
January 11, 2022

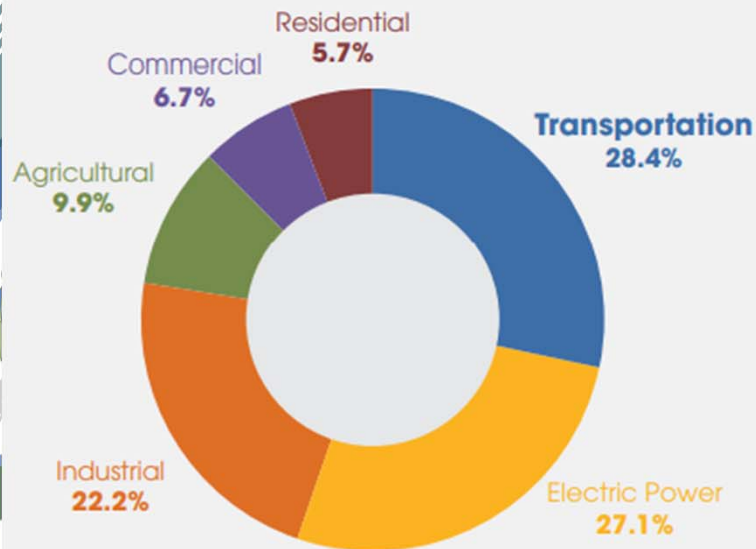
Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

- NOACA will manage and fund the procurement and installation of public electrical vehicle chargers as part of regional initiative.
- RTA sites chosen by NOACA: Louis Stokes at Windermere, Brookpark, and Green Road Rapid Stations
- Electric vehicles will charge by plugging in to charger at a parking space



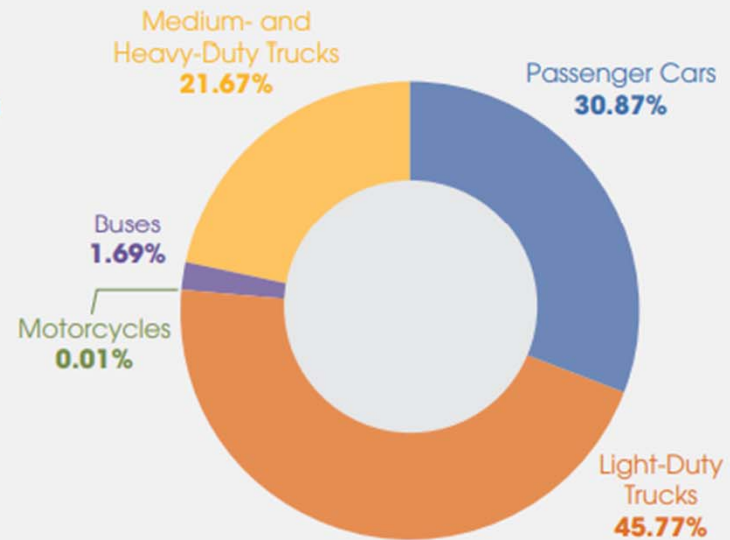
AIR QUALITY TRENDS

Figure 3-32. Share of GHG Emissions in the United States, by Sector⁶⁴

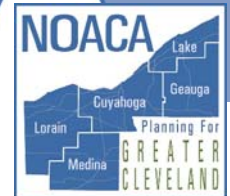


Source: U.S. EPA

Figure 3-33. Share of GHG Emissions by Vehicle Type in Northeast Ohio, 2019⁶⁵

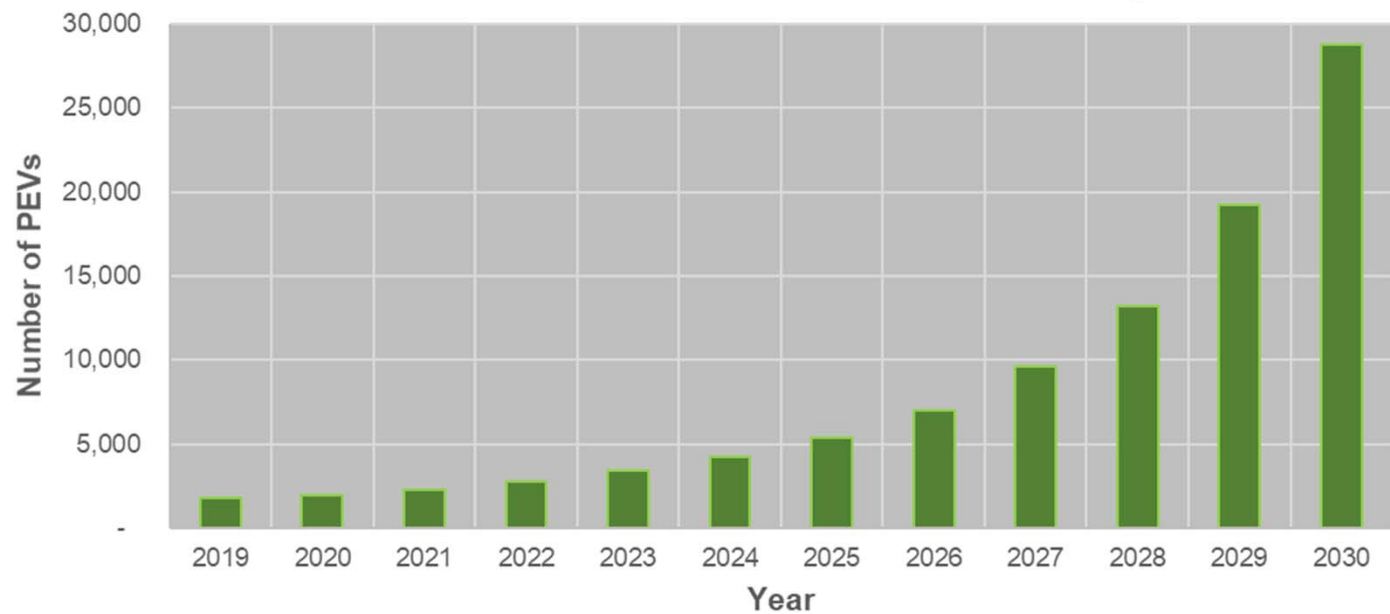


Source: NOACA estimates using MOVES2014a.



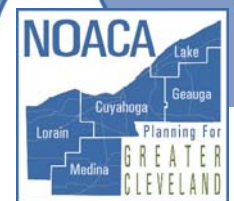
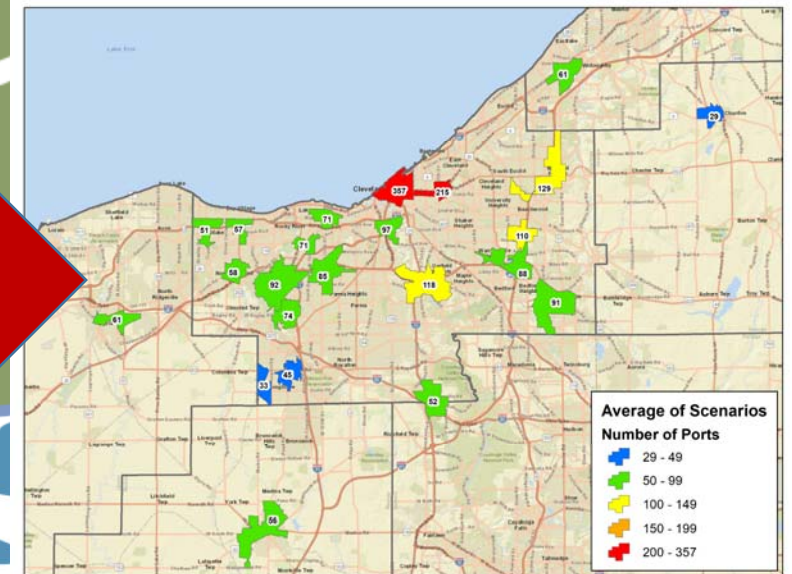
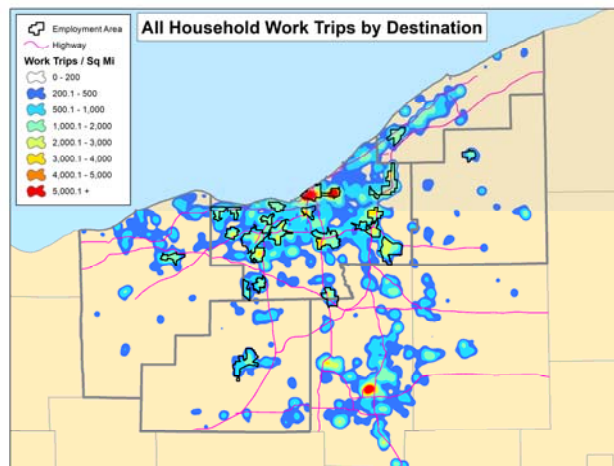
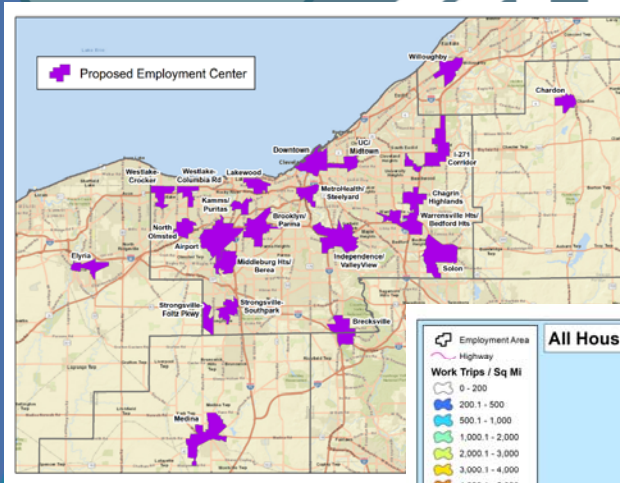
ANNUAL FORECAST

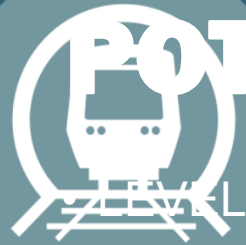
Estimated Number of PEVs in NOACA Region



POTENTIAL CHARGING LOCATIONS

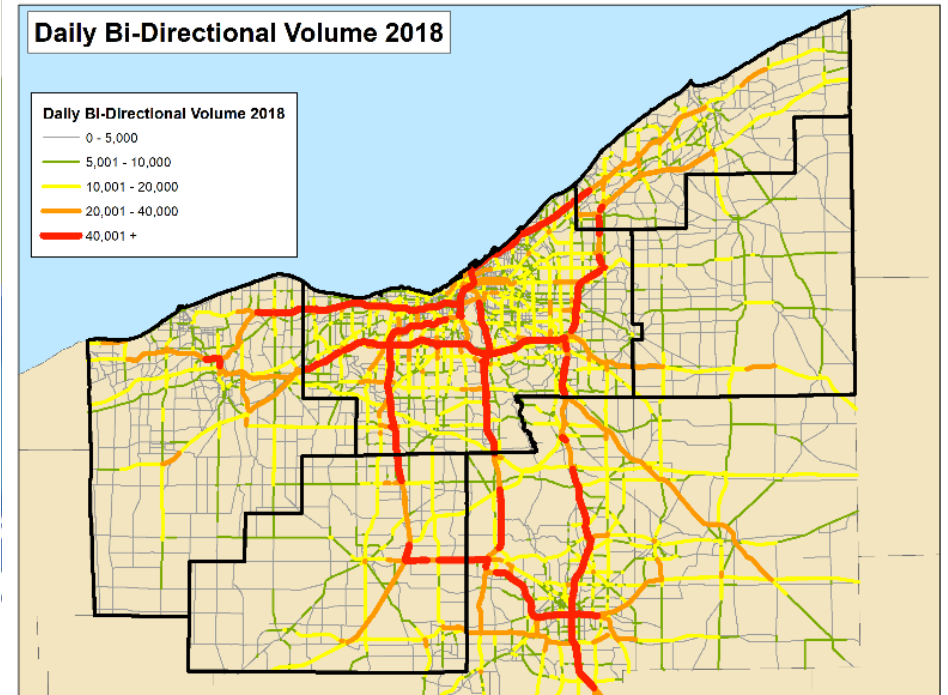
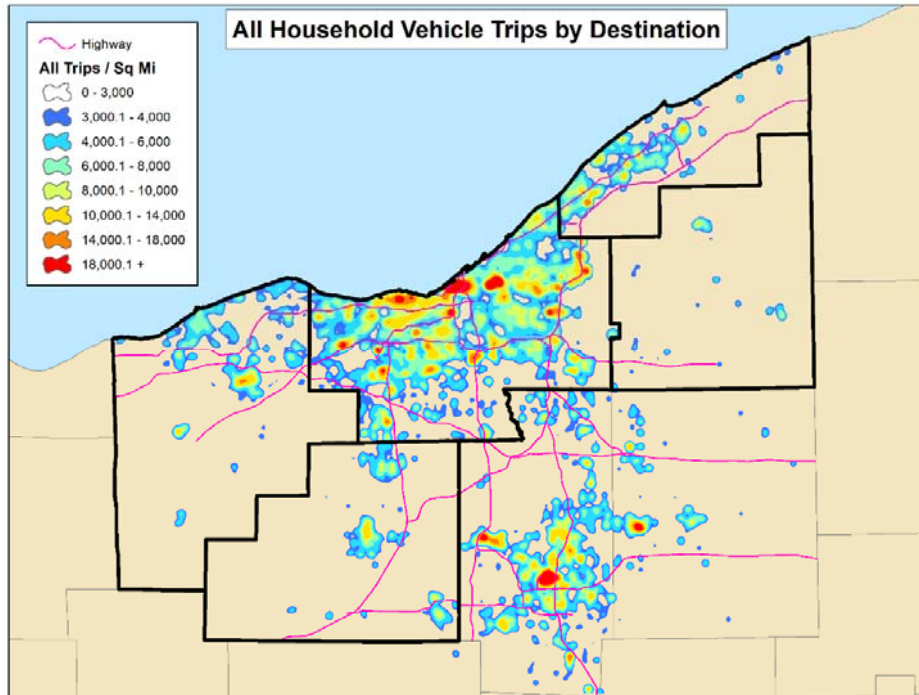
LEVEL 2 – ALL TRIPS / EMPLOYMENT AREAS





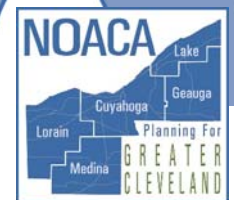
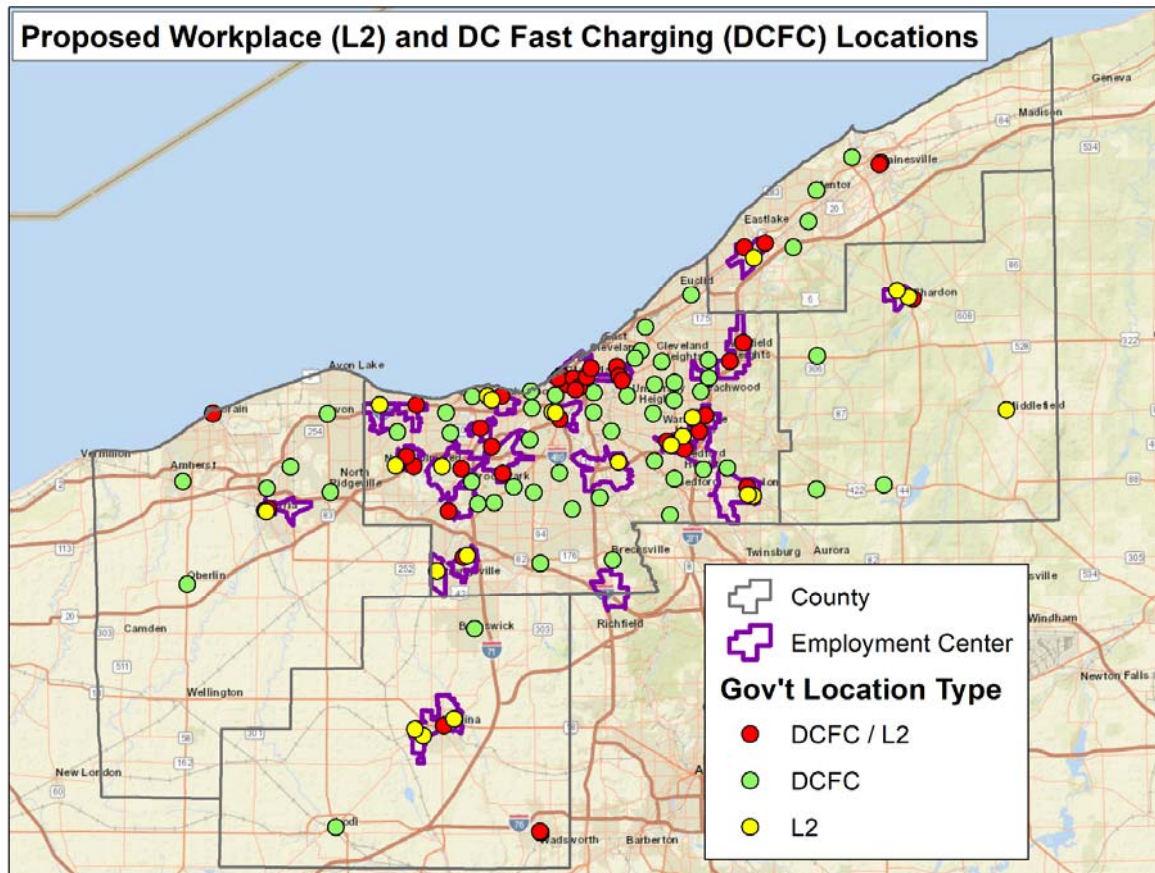
POTENTIAL CHARGING LOCATIONS

LEVEL 3 – TRIPS BY DESTINATION BI-DIRECTIONAL TRAFFIC VOLUME





TOTAL DISTRIBUTION SCENARIO



NOACA EVSE PROGRAM

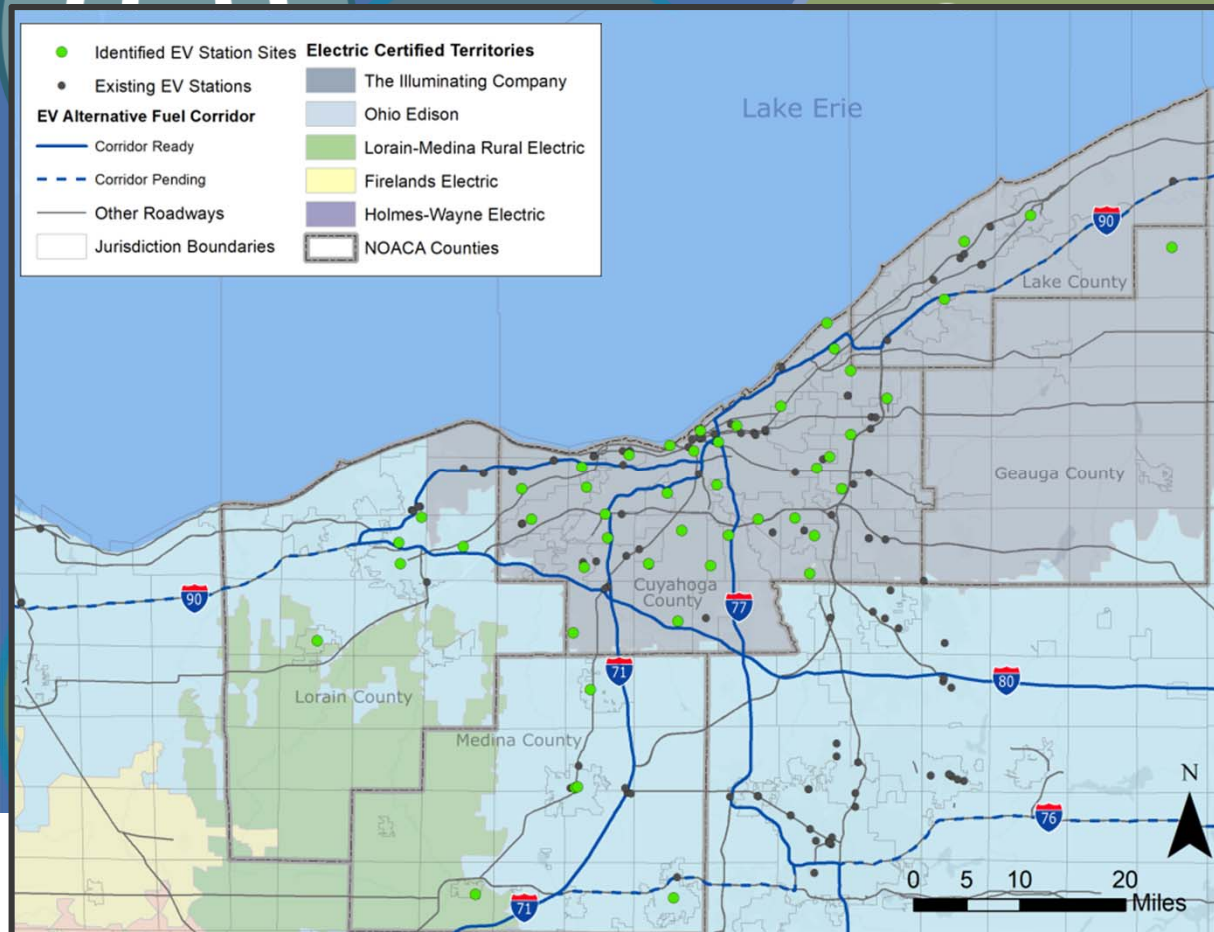


NOACA Board committed \$3 million in the 2021-2024 plan for an EV charging station program

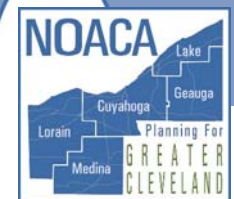
- Implement NOACA EV Charging Station siting plan
- Partnership program with local communities and regional agencies
- Improve air quality and create a more sustainable transportation system for northeastern Ohio



PROJECT AREA



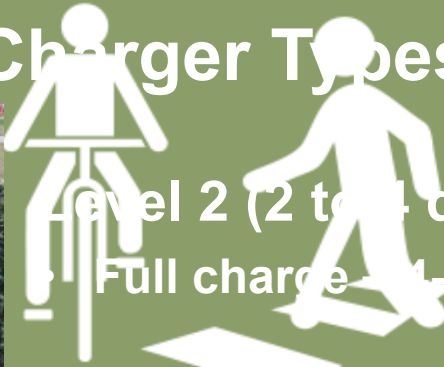
- 5 Counties
- 40 Communities / Agencies
- 47 Sites
- 125-150 EV ports





PROGRAM REQUIREMENTS

Eligible Charger Types



Level 2 (2 to 4 dual ports)

Full charge – 4-6 hours



Level 3 DCFC (1-4 dual port)

Full charge – 30-60 minutes



PROGRAM REQUIREMENTS

NOACA Led Responsibilities

- 100% of the implementation costs
- Design and construct
- 5 year prepaid networking plan – on-going software upgrades, configuration, and support, fee collection, power management
- Local project development process:
 - Environmental /Right of Way
 - Design and specifications
 - Permit
 - Construction Administration

RESPONSIBILITIES



PROGRAM REQUIREMENTS

Railroad Led Responsibilities

- Management for the 5 year useful life
- Maintenance
 - General vandalism, accidents, wear and tear
 - Public access
- Electric Costs
- Fee Structures
 - Recoup electric usage/demand
 - Maintenance
 - Auditing

RESPONSIBILITIES



PROGRAM OVERVIEW & SCHEDULE

- Create a regional program to deploy Level 2 and Direct Current Fast Charging (DCFC) stations across the NOACA region
- Work Accomplished to Date and Remaining Tasks

Dec 2020/Jan 2021

✓
Announce
Program
and
Conduct
Program
Workshop

Mar-Jul 2021

✓
RFP &
Contract
for
Planning
Services

Jul-Aug 2021

✓
Finalize
Partner
Interest
for
Planned
Locations

Sep-Oct 2021

✓
Conduct
Partner
Site
Visits

Oct-Nov 2021

Execute
Agreements
with
Partners

Nov 2021/ Jan 2022

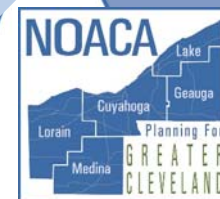
Develop
Regional
Deployment
Specs /
PS&E

Feb-Jun 2022

Procure &
Contract
for
Construction
Services

July 2022-
Spring 2022

Construction



Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

Benefits to RTA

- The market share of private electric vehicles is expected to grow considerably in the next 10 years
- Electric vehicle users will find it more convenient to utilize RTA because they can charge their vehicles while using RTA

Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

- Electrical cost scenario developed by GCRTA Energy Manager
 - Monthly costs based on peak demand as well as daily usage
 - More cars charging = less cost per car
 - Fast chargers = greater peak demand, more costly

Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

	DCFC Fast Charger	Level II Charger
Total Charges per Month	Cost per Car	Cost per Car
2	\$903	\$126
30	\$62	\$11
60	\$32	\$6

- For comparison Level II charger at Euclid Municipal Court is set at \$0.22/kWh, or equivalent \$11 user fee assuming 50kWh per full charge.

Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

Green Road
Preliminary EV
Chargers Location

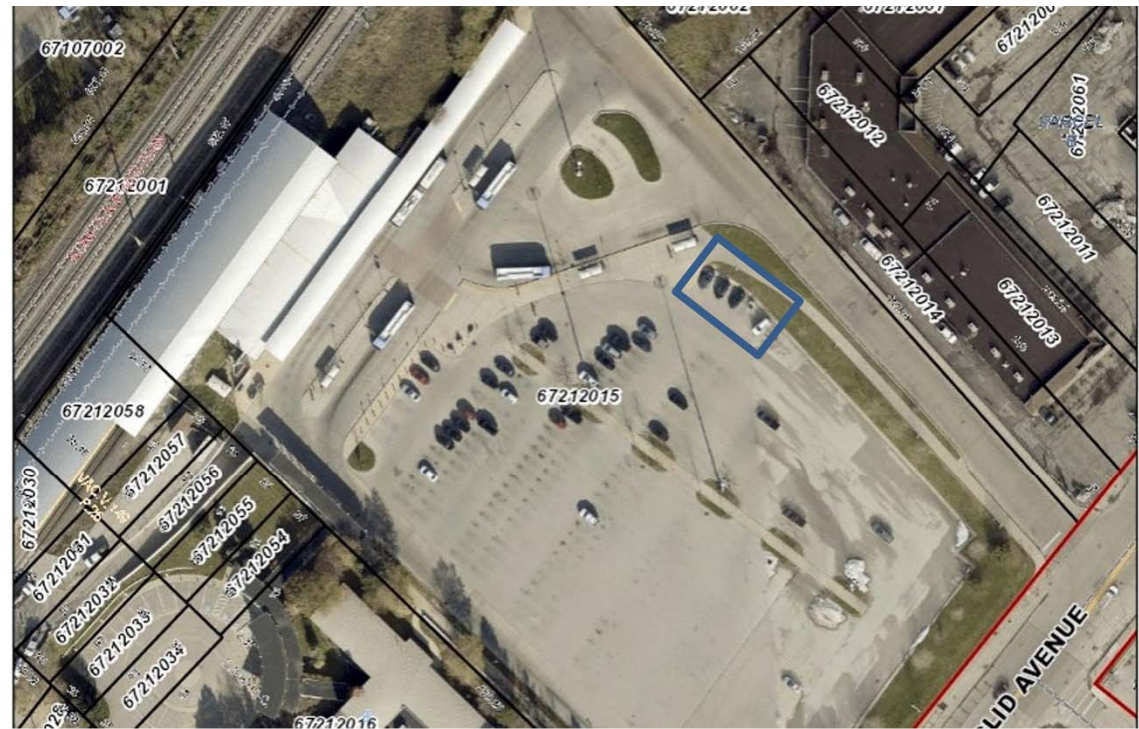
3 Level II ports



Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

Louis Stokes at
Windermere
Station Preliminary
EV Chargers
Location

4 Level II ports

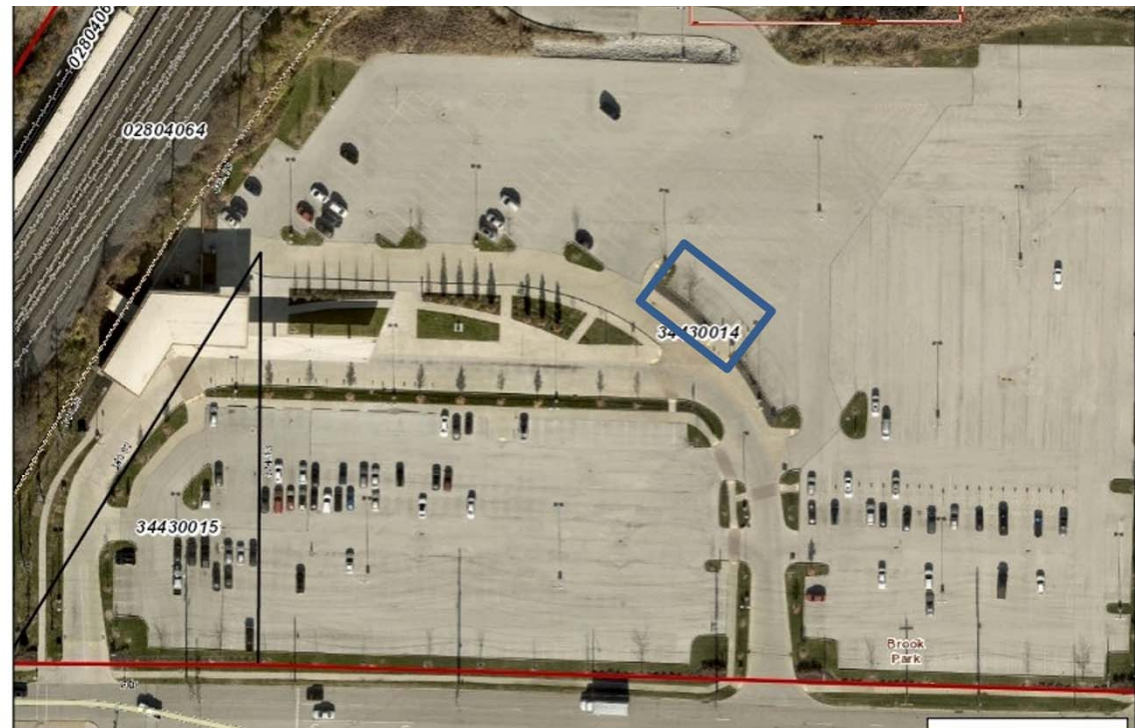


Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

Brookpark Station
Preliminary EV
Chargers Location

2-4 Level II ports

option for 2 DC ports



Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

- Staff requests that the Operational Planning and Infrastructure Committee recommend Board approval of a resolution authorizing GCRTA to enter into agreements with NOACA for each proposed charging site.

Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

Questions?