TECHNICAL MEMORANDUM

DATE: **October 1, 2024**

TO: **Massachusetts Department of Transportation and the Federal Highway Administration**

FROM: **Boston Region Metropolitan Planning Organization Staff**

RE: **Boston Region MPO Mid-Performance Period CMAQ Progress Report (2024)**

The Boston Region Metropolitan Planning Organization (MPO) has developed this mid-performance period Congestion Mitigation and Air Quality Improvement (CMAQ) performance plan for the second federal performance period in accordance with Title 23 of the Code of Federal Regulations (CFR), part 490.107(c)(3), and Title 23 of the United States Code, part 149(l). This plan contains the following:

- Information about performance of federally required CMAQ measures at the mid-point of the second federal performance period
- Information about targets for federally required CMAQ performance measures, including any updates to targets set in calendar year (CY) 2022
- Descriptions of CMAQ projects scheduled for funding during the second federal performance period, along with information on the potential benefits of these projects with respect to CMAQ performance measures
- An assessment of the CMAQ projects' contribution towards achieving two-year and four-year targets

The Boston Region MPO has submitted this mid-performance period CMAQ Performance Plan for inclusion with the Massachusetts October 2024 Performance Management Form.

1 BOSTON REGION MPO CMAQ APPLICABILITY DETERMINATIONS

1.1 Applicability for On-Road Mobile Source Emissions Measure

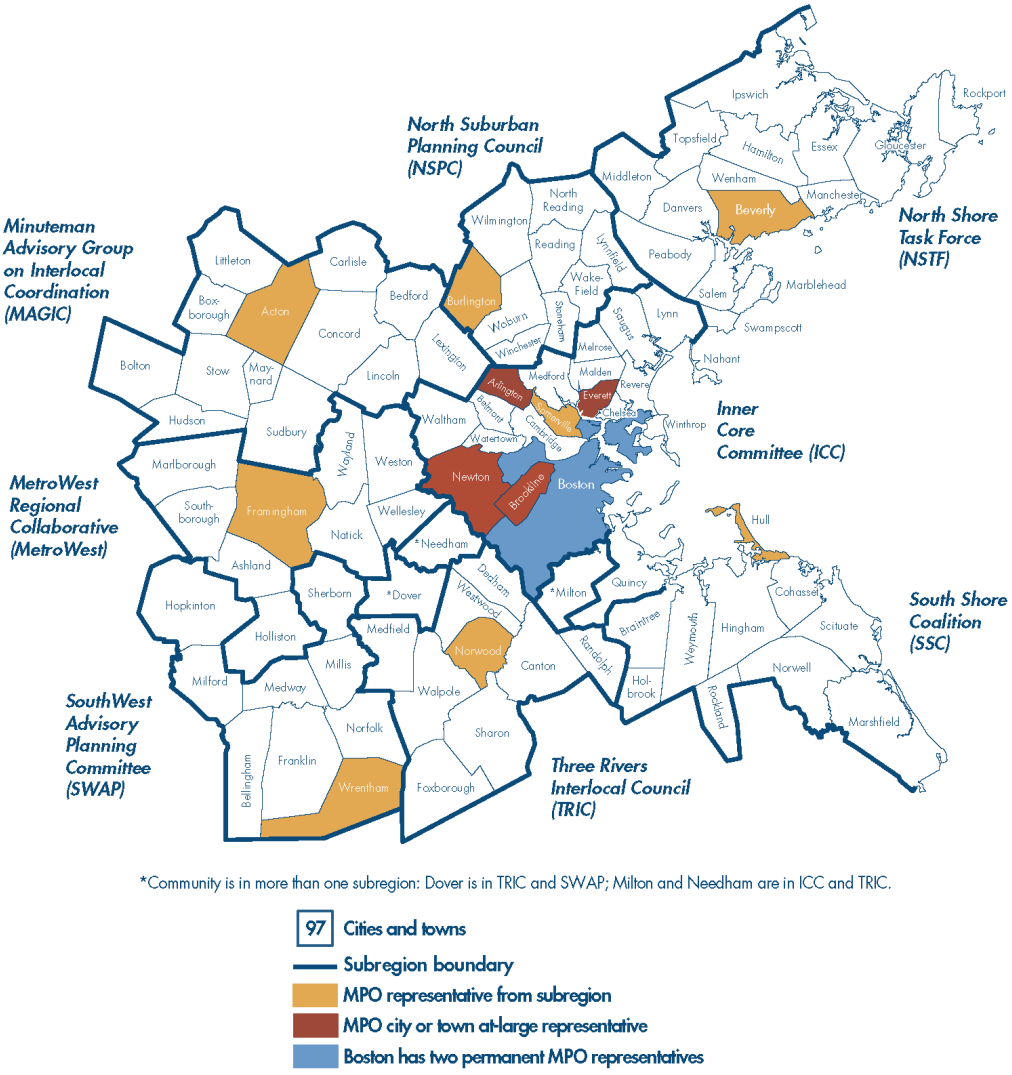
The Boston Region MPO serves 97 municipalities in eastern Massachusetts as shown in Figure 1. The region formerly included a limited maintenance area for carbon monoxide in Waltham. On April 22, 2002, the City of Waltham was redesignated as being in attainment for carbon-monoxide emissions with a limited maintenance plan approved by the US Environmental Protection Agency (EPA). This limited maintenance status expired in April of 2022, six months after the start of the FFY 2022–25 CMAQ Performance Plan period. While the MPO is not required to perform a modeling analysis for a conformity determination for carbon monoxide, the MPO is still required to provide a status report on the

timely implementation of projects and programs that will reduce emissions from transportation sources—so-called transportation control measures—which are included in the Massachusetts State Implementation Plan. The MPO provides this information in annual updates to its Transportation Improvement Program (TIP).

The Federal Highway Administration's (FHWA) October 2021 applicability determination for CMAQ traffic congestion and on-road mobile source emissions measures determined that the Boston Region MPO was required to develop a CMAQ performance plan and establish two-year and four-year targets for the on-road mobile source emissions measure.[1] These two-year and four-year targets pertain to carbon monoxide emissions. The 20-year maintenance period for the Waltham carbon monoxide area ended in April 2022. Therefore, the MPO is no longer required to demonstrate transportation conformity but must submit this CMAQ mid-performance period report to show progress toward plans and targets set at the beginning of the second federal performance period.

[1] FHWA, "Applicability Determination: CMAQ Traffic Congestion and CMAQ On-road Mobile Source Emissions Measures, https://www.fhwa.dot.gov/environment/air_quality/cmaq/measures/cmaq_applicability/october_2021/#toc494364458, accessed July 13, 2024.

Figure 1
Boston Region MPO Municipalities



1.2 Applicability for Traffic Congestion Measures

The Boston Region MPO is part of the Boston MA-NH Urbanized Area (UZA), as established by the 2020 US Census. The FHWA's October 2021 applicability determination for CMAQ traffic congestion and on-road mobile source emissions measures states that targets for the traffic congestion measures must be established for the Boston MA-NH UZA and that the Boston Region MPO must participate in this target-setting process.[2] This is because the Boston region includes (1) mainline highways on the National Highway System (NHS) that cross into an urbanized area with a population of more than one million, and (2) a limited maintenance area that overlaps an urbanized area with a population of more than one million.

2 BASELINE CONDITIONS AND PERFORMANCE TARGETS

2.1 On-Road Mobile Source Emissions Measure

Baseline Conditions

The total emissions reduction measure, which addresses on-road mobile source emissions, is the cumulative estimated emission reductions for all CMAQ-funded projects of each applicable criteria pollutant and precursor for which the area within the MPO region is designated as a nonattainment or maintenance area. Applicable criteria pollutants include ozone (O_3), carbon monoxide (CO), and particulate matter ($PM_{2.5}$ and PM_{10}), while precursors include volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). As mentioned in Section 1, the Boston Region MPO formerly included a limited maintenance area for carbon monoxide in Waltham, which expired in April 2022 after the reporting period commenced on October 1, 2021, and therefore this report measures estimated reductions of carbon monoxide from CMAQ-funded projects for this reporting period.

To establish a baseline for this measure, Boston Region MPO staff reviewed listings of obligated projects in federal fiscal years (FFYs) 2022–25 that were both (1) located in Waltham and (2) funded all or in part with CMAQ dollars.

Initial Performance Targets

The Boston Region MPO was required to set performance targets for the total emissions reduction measure with respect to its carbon monoxide maintenance area in Waltham for the second federal performance-monitoring period (FFYs 2022–25). These targets include the following:

- A two-year target reflecting daily emissions reduction from applicable projects in the CMAQ Public Access System for FFYs 2022 and 2023

[2] FHWA, "Applicability Determination: CMAQ Traffic Congestion and CMAQ On-road Mobile Source Emissions Measures," page 21.

- A four-year target reflecting daily emissions reduction from applicable projects in the CMAQ Public Access System for FFYs 2022–25

When developing these performance targets, Boston Region MPO staff reviewed transportation projects programmed in its FFYs 2022–26 and FFYs 2023–27 TIPs to identify any projects that

- will be partially or fully funded with CMAQ dollars;
- are expected to be obligated between FFYs 2022–25; and
- will be in or will serve Waltham.

Staff identified one project that meets this criteria: the NewMo Microtransit Service Expansion Project, which is funded through the MPO's Community Connections Program and received funding in FFYs 2022–25. As a result, the MPO set its two-year and four-year carbon monoxide emissions reduction targets to 0.354 kg per day. Table 1 summarizes this information.

Table 1
Boston Region MPO Emissions Reduction Targets

Performance Measure	Baseline Years and Data	Baseline Value	Two-Year Target (FFYs 2022–23)	Four-Year Target (FFYs 2022–25)
Daily kilograms of CO emissions reduction from CMAQ projects in Boston region nonattainment or maintenance areas	FFYs 2018–21 data on obligated projects with CMAQ funding	0 kg per day	0.354 kg per day	0.354 kg per day

Note: A limited maintenance area for carbon monoxide was formerly located in Waltham.
CMAQ = Congestion Mitigation and Air Quality. CO = carbon monoxide. FFY = federal fiscal year.
kg = kilogram. MPO = metropolitan planning organization.
Sources: Boston Region MPO.

The Boston Region MPO took action to adopt these emissions reduction performance targets on October 20, 2022.

Mid-Point Performance Evaluation and Impacts

In 2022, the Boston Region MPO set two-year and four-year targets for the total emissions reduction measure, both of which were equal to 0.354 kilograms. MPO staff used project data from TIP plans that include funds obligated for FFYs 2022, 2023, 2024, and 2025. The NewMo Microtransit Service Expansion Project was expected to reduce carbon monoxide emissions by 0.354 kg per day. The expected reduction in carbon monoxide emissions is based on a formula with factors for ridership of the NewMo project's shuttle vehicles. Ridership data from FFYs 2022 and 2023 results in carbon monoxide reduction estimates of 0.053 kg per day, below the two-year target of 0.354 per day. While ridership fell below the estimates made before the program's implementation, the program's addition of electric vehicles in CY 2023 resulted in greater reductions in carbon monoxide

than were projected using hybrid vehicles. Additionally, the NewMo project ended its shuttle service in July 2024.

Table 2 summarizes information about the Boston Region MPO's baseline and mid-performance-period values for the total emissions reduction measure and about the MPO's performance targets for this measure.

Table 2
Boston Region MPO Emissions Reduction Measure Values and Targets

Performance Measure	Baseline Value (FFYs 2018–21 data)	Two-Year Target (FFYs 2022–23)	Two-Year Value (FFYs 2022–23 data)	Four-Year Target (FFYs 2022–25)
Daily kilograms of CO emissions reduction from CMAQ projects in Boston region nonattainment or maintenance areas	0 kg per day	0.354 kg per day	0.053 kg per day	0.354 kg per day

Note: A limited maintenance area for carbon monoxide was formerly located in Waltham. The baseline and mid-point values are based on data about projects that have been federally obligated with CMAQ dollars during relevant time periods.
CMAQ = Congestion Mitigation and Air Quality. CO = carbon monoxide. FFY = federal fiscal year. MPO = Metropolitan Planning Organization.
Source: Boston Region MPO.

2.2 Traffic Congestion Measures

The FHWA established two CMAQ performance measures related to traffic congestion, which are to be measured for identified UZAs:

- Percent of non-single-occupancy vehicle (non-SOV) travel
- Annual hours of peak hour excessive delay (PHED) per capita

Baseline Value for Percent of Non-SOV Travel

The Boston MA-NH UZA baseline for this measure was established using 2016–20 US American Community Survey (ACS) estimates, which were the most recent five-year estimates available as of CY 2022. Massachusetts Department of Transportation (MassDOT), New Hampshire Department of Transportation (NH DOT), and MPO staff reviewed estimates of the means of transportation to work for workers age 16 and older, as outlined in ACS tables DP03 ("Selected Economic Characteristics"). The baseline for the percent of non-SOV travel in the Boston MA-NH UZA was developed by subtracting the estimated share of workers age 16 and older who drove alone to work from 100 percent. The resulting baseline value for the share of non-SOV travel for the Boston MA-NH UZA was 36.9 percent.

Initial Targets for Percent of Non-SOV Travel

Based on the FHWA's October 2021 applicability determination, the Boston Region MPO and the Northern Middlesex Council of Governments (NMCOG) were required to establish the following targets for the Boston MA-NH UZA for the percent of non-SOV travel measure:

- A two-year target, which reflects expected performance on this measure as of the end of CY 2023
- A four-year target, which reflects expected performance on this measure as of the end of CY 2025

When setting targets, MassDOT, NHDOT, the Boston Region MPO, and the Northern Middlesex MPO experimented with creating trend lines using ACS estimates reflecting non-overlapping five-year periods, per US Census guidance. These trend lines would be used to project the share of non-SOV travel for years beyond 2020, the most recent year for which a five-year ACS estimate (2016–20) was available at the time the targets were established. Comparisons of past five-year ACS estimates show that the share of non-SOV travel for trips to work has increased when compared to 2015–19 and prior. While pandemic-related trends had only just begun to be reflected in ACS estimates, MPO staff included factors such as remote work and public transit use since the onset of the COVID-19 pandemic to project non-SOV travel.

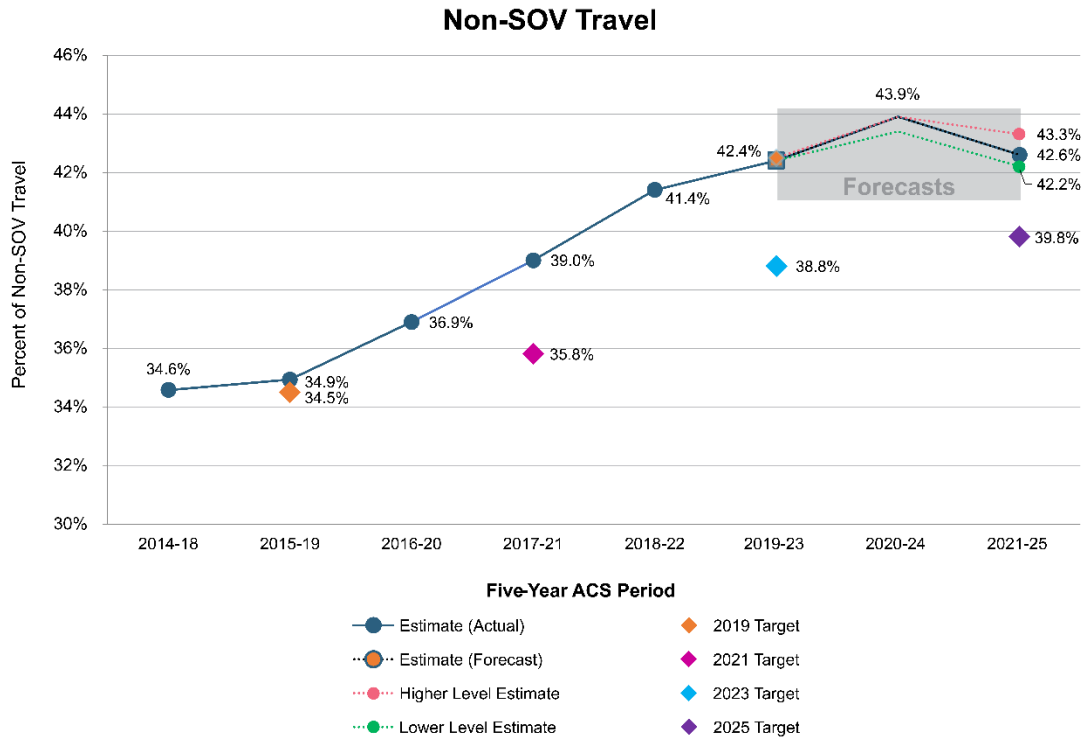
Mid-Point Performance Evaluation and Impacts

The COVID-19 pandemic had noticeable impacts on travel patterns beginning in 2020. The percentage of non-SOV travel according to ACS five-year estimates grew from 36.9 percent in 2016–20 to 41.4 percent in 2018–22. At the same time, ACS one-year estimates show that while there was a large increase in workers not using SOVs to get to work, that share of workers may be leveling off or even receding since 2022. The 2021 ACS one-year estimates show that non-SOV travel to work was 45.8 percent, but that figure decreased to 44.0 percent in the 2022 ACS one-year estimate. There is no ACS one-year estimate for 2020.

The primary driver of non-SOV travel in the UZA has been residents working from home. While there is no ACS one-year estimate for 2020, the percentage of respondents answering "worked from home" increased from 5.3 percent in 2019 to 26.8 percent in 2021. That percentage decreased to 20.7 percent in 2022 but remains a nearly four times greater rate than that of 2019, before the onset of the COVID-19 pandemic.

Given the trends described previously, the Boston Region MPO board voted on September 19, 2024, to amend the four-year target for non-SOV travel to 42.6 percent to reflect changing travel patterns. Figure 2 shows the historic five-year ACS estimates, the initial two-year and four-year targets set in 2022 and the projected estimates made in 2024.

Figure 2
Actual Values and Targets for the Percent of Non-SOV Travel in the Boston MA-NH UZA (as of July 2024)



Note: Values in this figure reflect five-year rolling averages for the percent of non-SOV travel to work.
ACS = US American Community Survey. Non-SOV = non-single-occupancy vehicle.
Sources: US Census Bureau, ACS Five-Year Estimates (Table DP03, "Selected Economic Characteristics"); MassDOT; NH DOT; and the Boston Region Metropolitan Planning Organization.

The Boston Region MPO is required to report UZA targets for the percent of non-SOV travel measure that are identical to those reported by MassDOT and NH DOT. The Boston Region MPO voted to update the four-year targets on September 19, 2024. These target values are summarized in Table 3.

Table 3
Boston MA-NH UZA Targets and Performance for the Percent of Non-SOV Travel Measure

Performance Measure	Baseline Value (CYs 2016–20 average)	Two-Year Target (CYs 2019–23 average)	Actual One-Year Value (CYs 2017–21 average)	Adjusted Four-Year Target (CYs 2021–25 average)
Percent of non-SOV travel	36.9%	38.8%	41.4%	42.6%

ACS = US American Community Survey. CMAQ = Congestion Mitigation and Air Quality. CY = calendar year. MA = Massachusetts. NH = New Hampshire. Non-SOV = non-single-occupancy vehicle. UZA = urbanized area.
Sources: MassDOT, NH DOT, ACS and the Boston Region MPO.

Baseline Value for Annual Hours of Peak Hour Excessive Delay per Capita

States and MPOs that are required to monitor the annual hours of PHED per capita measure of a given UZA must report identical baselines in applicable planning documents. MassDOT and NHDOT worked with the Center for Advanced Transportation Technology Laboratory (CATT Lab) at the University of Maryland to develop estimates of the annual hours of PHED per capita for CY 2021. Table 4 summarizes the data sources used to support these calculations.

Table 4
Data Elements for Calculating Annual Hours of PHED Per Capita for the Boston MA-NH-RI UZA (as of September 2022)

PHED Measure Data Element	Source for the Boston UZA
UZA Boundary	2010 US Decennial Census
UZA Population	2020 population estimate for MA and NH portions of UZA, based on 2016–20 American Community Survey
Reporting Segments	2021 HPMS data for MA and NH
Travel times in 15-minute intervals	2021 NPMRDS data for MA and NH
Hourly Traffic Volume	AADT reported to the HPMS by MassDOT and NH DOT
Annual Vehicle Classification for Buses, Trucks, and Cars	AADT, AADT single unit, and AADT combination unit classification data as reported to the HPMS
Annual Vehicle Occupancy for Cars, Buses, and Trucks	Data provided by FHWA in *Average Vehicle Occupancy Factors for Computing Travel Time Reliability Measures and Total Peak Hour Excessive Delay Metrics, April 2018*

AADT = average annual daily traffic. FHWA = Federal Highway Administration. HPMS = Highway Performance Monitoring System. MA = Massachusetts. NH = New Hampshire. NPMRDS = National Performance Management Research Data Set. PHED = peak hour excessive delay. RI = Rhode Island. UZA = urbanized area.
Source: MassDOT, NH DOT, and Boston Region MPO staff.

Initial Targets for Annual Hours of Peak Hour Excessive Delay per Capita

Based on FHWA's 2021 applicability determination, MassDOT, NH DOT, the Boston Region MPO, and the NMCOG were required to establish a four-year target for the annual hours of PHED per capita measure, which reflects expected performance on this measure as of the end of CY 2025. These agencies also opted to report a two-year target for this measure, which reflects expected performance as of the end of CY 2021.

When proposing targets, MassDOT and NHDOT reviewed NPMRDS travel time data, speed data, and AADT information for NHS roadways. These agencies also reviewed population data from the ACS and the 2020 Decennial Census. As previously discussed, changes in travel patterns in response to the COVID-19 pandemic caused fluctuations in the annual hours of PHED.

Given the uncertainty of travel demand at the time of target setting in 2022, MassDOT and NH DOT proposed a target, which the MPO adopted, of 24.0 annual hours of PHED per capita for CY 2023. Staff from these agencies proposed a target of 22.0 annual hours of PHED per capita for CY 2025, which assumes strategies and policies are implemented to mitigate growth in congestion during this four-year period.

The Boston Region MPO is required to report UZA targets for the annual hours of PHED per capita measure that are identical to those reported by MassDOT and NH DOT. The Boston Region MPO took action to adopt these targets for the annual hours of PHED per capita measure on October 20, 2022. These target values are summarized in Table 5.

Table 5
Boston, MA-NH UZA Targets for the
Annual Hours of PHED per Capita Measure

CMAQ Traffic Congestion Performance Measure	Baseline Value	Two-Year Target (CYs 2022–23)	Four-Year Target (CYs 2022–25)
Annual hours of PHED per capita	18.0 hours per person	24.0 hours per person	22.0 hours per person

ACS = American Community Survey. CMAQ = Congestion Mitigation and Air Quality. CY = calendar year. MA = Massachusetts. NH = New Hampshire. PHED = peak hour excessive delay. UZA = urbanized area. Sources: NPMRDS, FHWA, MassDOT, NH DOT, the US Census Bureau ACS, and the Boston Region MPO.

Mid-Point Performance Evaluation and Impacts

As discussed previously, the annual hours of PHED per capita measure estimates the expected excessive delay experienced by a UZA's population from travel on the NHS during peak periods. MassDOT, NH DOT, and Boston Region MPO staff accessed data from NPMRDS to develop updated estimates of the

annual hours of PHED per capita measure for CYs 2022 and 2023 using the data sources described in Table 6.

Table 6
Data Elements for Calculating Annual Hours of PHED Per Capita for the Boston MA-NH UZA (as of September 2024)

PHED Measure Data Element	Source for the Boston MA-NH UZA
UZA Boundary	2020 Decennial Census Urban Boundaries as reported by MassDOT and NHDOT
UZA Population	2020 Decennial Census population for each Census Block in the UZA
Reporting Segments	2022 NPMRDS datasets for Massachusetts and New Hampshire
Travel times in 15-minute intervals	2022 NPMRDS datasets for Massachusetts and New Hampshire
Hourly Traffic Volume	AADT reported to NPMRDS by Massachusetts and NH DOT
Annual Vehicle Classification for Buses, Trucks, and Cars	An estimate of the unidirectional AADT based on the HPMS-conflated attribute of AADT
Annual Vehicle Occupancy for Cars, Buses, and Trucks	Data provided by FHWA in *Average Vehicle Occupancy Factors for Computing Travel Time Reliability Measures and Total Peak Hour Excessive Delay Metrics, April 2018*

AADT = average annual daily traffic. ACS = US American Community Survey. FHWA = Federal Highway Administration. HPMS = Highway Performance Monitoring System. MA = Massachusetts. MSA = Metropolitan Statistical Area. NH = New Hampshire. NPMRDS = National Performance Management Research Data Set. UZA = urbanized area.
Source: MassDOT, NH DOT, and Boston Region MPO.

Table 7 lists the components of actual performance for the annual hours of PHED per capita measure for CYs 2021 and 2022. These include (1) a PHED estimate that reflects the NHS network within the Boston MA-NH-UZA and (2) the UZA population. This table also lists the values for the annual hours of PHED per capita measure for each year.

Table 7
Boston MA-NH UZA Values for Annual Hours of PHED Per Capita (as of August 2024)

Year	MA and NH Annual PHED (hours)	Boston MA-NH UZA Population	Annual PHED Per Capita for the Boston MA-NH UZA (hours per person)
2021 (baseline)	80,295,124	4,454,243	18.0
2022	67,899,535	4,594,085	14.8

ACS = American Community Survey. HPMS = Highway Performance Monitoring System. MA = Massachusetts. NH = New Hampshire. NHS = National Highway System. PHED = peak hour excessive delay. UZA = urbanized area.
Sources: HPMS data for Massachusetts and New Hampshire, US Census Bureau ACS, MassDOT, NH DOT, the Center for Advanced Transportation Technology Laboratory (CATT Lab) at the University of Maryland, INRIX, and Boston Region Metropolitan Planning Organization staff.

The 2022 estimates for actual performance reflect a decrease in PHED compared to the baseline value of 18.0 hours of delay per capita from 2021. PHED levels had been increasing prior to 2020, the onset of the COVID-19 pandemic. In 2020, PHED decreased sharply from 25.6 to 12.8 hours, before increasing to 18.0 hours in 2021. Given the impacts of the pandemic, PHED has been a relatively elastic measure of congestion. While actual performance for PHED congestion levels for 2022 are below the two-year and four-year targets, the targets will not be adjusted as part of this mid-performance period progress report.

Table 8
Boston MA-NH UZA Targets for the Annual Hours of PHED Per Capita Measure (as of September 2024)

Performance Measure	Baseline Value (CY 2021)	Two-Year (CY 2022-23) Target	Estimated One-Year (CY 2022) Value	Four-Year (CY 2022-25) Target
Annual hours of PHED per capita	18.0 hours per person	24.0 hours per person	14.8 hours per person	22.0 hours per person

CY = calendar year. MA = Massachusetts. NH = New Hampshire. PHED = peak hour excessive delay. UZA = urbanized area.
Sources: NPMRDS, US Census Bureau American Community Survey, MassDOT, NH DOT, the Center for Advanced Transportation Technology Laboratory (CATT Lab) at the University of Maryland, INRIX, and Boston Region Metropolitan Planning Organization staff.

3 DESCRIPTIONS AND STATUS OF CMAQ-FUNDED PROJECTS

This CMAQ performance plan describes projects either wholly or partially funded with CMAQ funding that are being implemented—or are expected to be implemented—in the Boston region. These projects include those that have been selected by the Boston Region MPO and those that have been selected by MassDOT. Prior to programming, CMAQ investments that the MPO may fund are reviewed by the CMAQ Consultation Committee, which is responsible for determining whether a project shows an air quality benefit and is eligible for CMAQ funding. The members of the committee include representatives from MassDOT, the Massachusetts Department of Environmental Protection (DEP), the United States Department of Transportation (USDOT), US EPA, and Massachusetts MPOs.

Table 9 describes projects in the Boston region that fall into the following categories:

- Projects for which federal CMAQ dollars were obligated in FFYs 2022, 2023, or 2024
- Projects for which federal CMAQ dollars are expected to be obligated in FFY 2025

For each project, the table provides this information:

- Description of the project and its location
- Expected and/or actual federal fiscal year(s) when CMAQ dollars have or will be obligated
- Construction or implementation status
- Qualitative assessments of the potential impacts that each project may have related to the CMAQ traffic congestion measures, based on past project evaluations for CMAQ eligibility and other data

Table 9 notes where MPO staff have made updates to project descriptions, funding obligation years, or assessments of impacts on traffic congestion measures, as appropriate.

While Boston Region MPO staff expect these projects will help to reduce the excessive delay people experience, increase the share of non-SOV travel in the Boston MA-NH UZA, and reduce emissions, MPO staff do not estimate that these projects have had a major impact on the two-year traffic congestion or emission reduction performance targets described in Section 2. These projects may contribute to progress towards the four-year targets for the relevant measures if construction is complete, the facilities are open for use, and travel patterns have restabilized by the end of CY 2025. Also, the MPO has funded several small-scale projects through its Community Connections Program in FFY

2024 and 2025—including signal improvements, carpool marketing support, new microtransit service, and bike shelters—that may be obligated for funding and implemented within that same year, and which could influence progress toward the four-year targets. Transit-supporting projects funded through MassDOT's Workforce Transportation Program may also contribute toward achieving the four-year targets. In general, however, the Boston Region MPO expects that the benefits of these projects will be realized in future years and support progress towards future sets of performance targets.

Table 9
CMAQ-funded Transportation Projects Programmed in the Boston Region: FFYs 2022–25

Project Name	Project Category	Project Description	Municipalities	Obligation Years	Implementation Status	Relationship to CMAQ Performance Measure
Acton – Intersection and Signal Improvements at Massachusetts Avenue and Main Street	Intersection Improvements	Add turn lanes, reduce and consolidate curb cuts, improve signage and wayfinding, and provide accommodations for vehicles, bicyclists, and pedestrians.	Acton	2022	Under Construction	The project will improve and add sidewalks and is expected to add bicycle accommodations, which may encourage non-SOV travel. Signal and geometric improvements included in the project may reduce PHED on NHS segments within the project area. The project is expected to reduce transportation related emissions.
Acton – Parking Management System	Community Connections	Implement digital parking management products to improve the efficiency of permitting and enforcement processes at five parking lots surrounding the MBTA South Acton commuter rail station.	Acton	2022, 2024	Not yet implemented	This project leverages intelligent transportation systems to better utilize and manage the existing capacity of parking facilities in Acton to better connect residents with parking opportunities at commuter rail facilities and facilitate mode shift.
Alewife Wayfinding Improvements	Community Connections	Provide wayfinding measures at the MBTA Alewife Station with directional information and realtime shuttle information, alerting passengers of upcoming arrivals and departures and supporting their use of 128 Business Council shuttles.	Cambridge	2022	Not yet implemented	This project may encourage non-SOV trips by enhancing amenities and information people can use to access 128 Business Council shuttles. As more people make use of these shuttles, PHED may decrease on NHS routes in the 128 Business Council service area, including Route 2.
Bellingham - South Main Street (Route 126), from Mechanic Street (Route 140) to Douglas Drive	Complete Streets	Improve pavement condition and bicycle and pedestrian accommodations in the project corridor.	Bellingham	2022	Complete	This project will improve sidewalks, add sidewalks, and add bicycle accommodations to the corridor, which may help increase non-SOV travel. This project is also expected to reduce transportation related emissions.
BlueBikes Expansion: Arlington, Newton, Watertown	Community Connections	Install nine BlueBikes bikeshare stations.	Arlington, Newton, Watertown	2022	Complete	This project may increase non SOV travel by providing a new bicycle access option in these municipalities and is expected to reduce transportation-related emissions.
BlueBikes Expansion: Malden and Medford	Community Connections	Install six BlueBikes bikeshare stations.	Malden, Medford	2022	Complete	This project may increase non-SOV travel by providing a new bicycling option in these municipalities. It is expected to reduce transportation-related emissions.
Boston – Neponset River Greenway Construction	Bicycle and Pedestrian	Complete the northern link of the Neponset River Greenway by providing a shared-use path between Tenean Beach and Morrissey Boulevard.	Boston	2022	Under construction	This project will create approximately 0.77 miles of multiuse trail and connect to the rest of the Neponset River Greenway. It is expected to increase non-SOV travel by improving and extending bicycle and pedestrian facilities in Boston neighborhoods and by supporting connections to the Savin Hill and Fields Corner MBTA stations. This project is also expected to reduce transportation-related emissions.
Brookline – Transit App Education Program	Community Connections	This project will expand the TRIPPS Program (Transportation, Resources, Information, Planning and Partnership for Seniors) with the development of online training modules and other educational materials. The primary goal of this project is to enable older adults to travel more confidently and easily on public and private transportation modes.	Brookline	2022	Complete	This project is expected to increase non-SOV travel by promoting transit literacy.

Project Name	Project Category	Project Description	Municipalities	Obligation Years	Implementation Status	Relationship to CMAQ Performance Measure
Canton – Royall Street Shuttle	Community Connections	This project will establish a shuttle service connecting Canton's Royall Street employment cluster with the MBTA Route 128 commuter rail station and Ashmont, Mattapan Trolley, and Quincy Adams rapid transit stations.	Boston, Canton, Milton	2022, 2023, 2024	Service in operation	This project may increase non-SOV travel by providing a new public transit option. It may reduce PHED by providing an alternative to SOV travel on NHS routes. It is expected to reduce transportation-related emissions.
Chelsea – Reconstruction of Broadway, from City Hall Avenue to Revere City Line	Complete Streets	Reconstruct one mile of Broadway, improve sidewalks, and create bicycle accommodations.	Chelsea	2022	Under construction	The project will improve substandard sidewalks and add bicycle lanes in the corridor, which may encourage non- SOV travel. The project is expected to reduce transportation-related emissions.
Concord and Sudbury – Bruce Freeman Rail Trail, Phase 2D	Bicycle and Pedestrian	Construct a trail from Station Road in Sudbury to Powder Mill Road in Concord, including by improving structures and at-grade crossings.	Concord, Sudbury	2022	Under construction	This project will add more than five miles to the Bruce Freeman Rail Trail and connect to Phase 2C of the trail. By extending the region's bicycle network, this project is expected to increase non-SOV travel. It is also expected to reduce transportation-related emissions.
Green Line Extension Project: Extension to College Avenue with the Union Square Spur	Long-Range Transportation Plan		Medford, Somerville		Complete	This project may increase non-SOV travel by providing a new public transit option. It may reduce PHED by providing an alternative to SOV travel on NHS routes. It is expected to reduce transportation-related emissions.
Lynn – Reconstruction of Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square	Complete Streets	Improve safety features, drainage, curbing, pedestrian accommodations, intersection improvements, and other elements in the corridor, which runs from Colonial Avenue to south of Floyd Avenue.	Lynn	2022	Under construction	The project will upgrade substandard sidewalks and add bicycle lanes to the corridor, which may encourage non- SOV travel. This project is also expected to reduce transportation-related emissions.
Everett and Malden - Main Street Transit Signal Priority	Community Connections	Update signal equipment to enable transit signal priority on as many as nine signals along Main Street in Malden and Everett.	Everett, Malden	2022	Complete	This project is on the NHS and may reduce PHED by improving bus reliability and movement. It may help increase non-SOV travel in the region by making the bus a more attractive travel option in the Main Street corridor. It is expected to reduce transportation-related emissions.
MBTA – Systemwide Bike Racks	Community Connections	Increase bicycle parking capacity and improve bicycle parking facilities at as many as 40 MBTA stations.	Multiple	2022	Complete	This project may increase non-SOV travel in the region by enhancing bicycle amenities and supporting connections to the transit network. It is expected to reduce transportation-related emissions.
Newton – Newton Microtransit Service (Phase 1)	Transit Improvements	Implement a new dynamically routed microtransit service that will provide shared, first- and last-mile rides between three MBTA rail lines and the Wells Avenue Business District before expanding citywide.	Newton	2022, 2023	Complete	This project may increase non-SOV travel by providing a new public transit option. It may reduce PHED by providing an alternative to SOV travel on NHS routes in Newton. It is expected to reduce transportation-related emissions.
Newton and Weston - Multi-Use Trail Connection from Recreation Road to Upper Charles Greenway	Bicycle and Pedestrian	Create a multi-use trail connection from Recreation Road to the Upper Charles River Greenway and reconstruct a pedestrian bridge.	Newton, Weston	2022	Under construction	This project may increase non-SOV travel by creating a multi-use trail that connects to the Upper Charles Greenway. It is also expected to reduce transportation related emissions.

Project Name	Project Category	Project Description	Municipalities	Obligation Years	Implementation Status	Relationship to CMAQ Performance Measure
Wellesley – Bicycle Infrastructure	Community Connections	Improve bicycle facilities by installing covered bicycle racks at Wellesley Middle School.	Wellesley	2022	Complete	This project may increase non-SOV travel in the region by enhancing bicycle amenities near MBTA commuter rail stations.
Acton–Bicycle Parking along the Bruce Freeman Rail Trail	Community Connections	Install three bike racks at key locations along Great Road and the Bruce Freeman Rail Trail.	Acton	2023	Complete	This project may increase non-SOV travel in the region by enhancing bicycle amenities on the region's bicycle network. This project is also expected to reduce CO_2 and other transportation-related emissions.
Belmont–Chenery Middle School Bicycle Parking	Community Connections	Install a shelter over an existing bicycle rack at Chenery Middle School, which may serve as a proof-of-concept for future bicycle parking expansion.	Belmont	2023	Complete	This project may increase non-SOV travel in the region by enhancing bicycle amenities. It is also expected to reduce CO_2 and other transportation-related emissions.
Beverly– Reconstruction of Bridge Street	Complete Streets	Improve the roadway cross section, pavement, signals, and bicycle and pedestrian accommodations in the project corridor.	Beverly	2023	Under construction	The project area overlaps a 2017–19 HSIP all-mode crash cluster location, and the project is expected to improve safety performance, including for bicyclists and pedestrians. The project improves signal and geometry improvements that may support increased reliability and reduced PHED on nearby Route 62, which is on the NHS. It will also provide bicycle-on-shoulder lanes and improved sidewalks, which may encourage non-SOV travel. This project is also expected to reduce CO_2 and other transportation-related emissions.
Cambridge– Bluebikes Station Replacement and System Expansion	Community Connections	Install two new BlueBikes bikeshare stations and replace five existing stations to ensure a state of good repair.	Cambridge	2023	Partial implementation	This project may increase non-SOV travel by enhancing and expanding bicycling options in Cambridge. It is also expected to reduce CO_2 and other transportation-related emissions.
Framingham–Traffic Signal Installation at Edgell Road and Central Street	Intersection Improvements	Install traffic signals and make geometric improvements at the intersection of Edgell Road and Central Street. Add bicycle lanes, cross walks, and ensure sidewalks are ADA/AAB-compliant.	Framingham	2023	Under construction	The project is expected to improve safety performance, including for bicyclists and pedestrians. It also includes improvements to bicycle and pedestrian accommodations to support non-motorized travel through the intersection, which may encourage non-SOV travel. The project is expected to reduce CO_2 and other transportation-related emissions.
Lynn and Nahant: Northern Strand Extension	Bicycle and Pedestrian	Extend the Northern Strand trail an additional 1.92 miles from its current terminus at Western Avenue in Lynn to Nahant Beach via a separated shared-use facility along existing roads.	Lynn, Nahant	2023	Under construction	By extending the region's bicycle network, this project is expected to increase non-SOV travel. It is also expected to reduce transportation-related emissions.
Malden, Medford– BlueBikes System Expansion	Community Connections	Construct three new BlueBikes bikeshare stations in Medford and one in Malden.	Malden, Medford	2023	Complete	This project may increase non-SOV travel by expanding bicycling options in Medford and Malden. It is expected to reduce CO_2 and other transportation-related emissions.

Project Name	Project Category	Project Description	Municipalities	Obligation Years	Implementation Status	Relationship to CMAQ Performance Measure
MetroWest Regional Transit Authority (MWRTA) – CatchConnect Microtransit Service Expansion	Community Connections	Expand MWRTA's CatchConnect microtransit service to Hudson and Marlborough, which will support connections to MWRTA's fixed-route network.	Hudson, Marlborough	2023, 2024, 2025	Service in operation	This project may increase non-SOV travel by expanding microtransit service to new areas. It may reduce PHED and improve reliability on the NHS by providing an alternative to SOV travel on NHS routes in Hudson and Marlborough. This project is expected to help reduce CO_2 emissions.
Montachusett Regional Transit Authority (MART) – MART Microtransit Service	Community Connections	Establish an on-demand microtransit service that will serve Bolton, Boxborough, Littleton, and Stow.	Bolton, Boxborough, Littleton, Stow	2023, 2024, 2025	Service in operation	This project may increase non-SOV travel by providing a new transit option. It may reduce PHED and improve reliability on the NHS by providing an alternative to SOV travel on NHS routes in Boxborough, Bolton, Littleton, and Stow. It is expected to reduce CO_2 and other transportation-related emissions.
Newton: Reconstruction of Commonwealth Avenue (Route 30), from East of Auburn Street to Ash Street	Bicycle and Pedestrian	The project aims to create safe bicycle and pedestrian facilities to improve the City of Newton's connectivity to green space, trails, and other recreation opportunities.	Newton	2023	Under construction	This project may increase non-SOV travel by expanding the region's bicycle network. The project also aims to improve safety outcomes.
Newton–NewMo Microtransit Service Expansion (Phase 2)	Community Connections	Expand an existing Newton-wide microtransit service (see project S12125) to include stops in six neighboring municipalities.	Newton (adding service to Boston, Needham, Waltham, Watertown, Wellesley, Weston)	2023, 2024	Service in operation	This project may increase non-SOV travel by expanding the reach of Newton's existing microtransit service. It may reduce PHED and improve reliability on the NHS by providing an alternative to SOV travel on NHS routes in multiple MPO communities. This project is expected to reduce CO_2 and other transportation-related emissions.
Norwood– Intersection Improvements at Route 1A and Upland Road/Washington Street and Prospect Street/Fulton Street	Intersection Improvements	Make intersection improvements at two locations on Route 1A. Install traffic and pedestrian signals and widen Washington Street and Upland Road to accommodate turn lanes. Reconstruct existing sidewalks to meet ADA/AAB standards.	Norwood	2023	Under construction	The project is expected to improve safety performance, including for bicyclists and pedestrians. It will upgrade existing sidewalks, and add new sidewalks and bicycle accommodations in the project area, all of which may encourage non-SOV travel. The project is expected to reduce CO_2 and other transportation-related emissions.
Peabody– Rehabilitation of Central Street	Complete Streets	Reconstruct pavement and sidewalks, provide bicycle accommodations, upgrade signals, and improve other features within the project corridor.	Peabody	2023	Under construction	The project is expected to improve safety performance, including for bicyclists and pedestrians. It is expected to improve nearly two lane miles of pavement on the NHS. Upgrades to signals and other elements may address improve reliability on unreliable NHS segments within the project corridor and potentially reduce PHED. The project will upgrade existing sidewalks and add bike lanes; these features are expected to increase non-SOV travel. This project is expected to reduce CO_2 and other transportation-related emissions.

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Salem–BlueBikes System Expansion	Community Connections	Construct three new BlueBikes bikeshare stations to expand the bikeshare network in Salem.	Salem	2023	Complete	This project may increase non-SOV travel by expanding bicycling options in Salem. It is expected to reduce CO_2 and other transportation-related emissions.
Stoneham– Stoneham Shuttle Service	Community Connections	Create a shuttle service to foster east–west connections between Stoneham and neighboring communities.	Stoneham	2023, 2024, 2025	Service in operation	This project may increase non-SOV travel by providing a new transit option. It may reduce PHED and improve reliability on the NHS by providing an alternative to SOV travel on NHS routes Stoneham. It is expected to help reduce CO_2 and other transportation-related emissions.
Watertown– Pleasant Street Shuttle Service Expansion	Community Connections	Expand a recently launched shuttle service along the Pleasant Street corridor in Watertown by reducing headways. Support the service's transition to using electric vehicles.	Cambridge, Watertown	2023, 2024, 2025	Service in operation	This project may increase non-SOV travel by supporting more frequent service on the Pleasant Street corridor. It may reduce PHED and improve reliability on the NHS by providing an alternative to SOV travel on NHS routes in Cambridge and Watertown. It is expected to reduce CO_2 and other transportation-related emissions.
Watertown– Rehabilitation of Mount Auburn Street (Route 16)	Complete Streets	Reconstruct the corridor from the Cambridge city line to east of Watertown Square. Revise roadway geometry; implement a roadway diet, safety improvements, and bicycle and pedestrian accommodations; and upgrade traffic signal equipment.	Watertown	2023	Under construction	The project area overlaps one 2010–19 HSIP pedestrian crash cluster location and is expected to improve safety performance, including for bicyclists and pedestrians. It will improve more than six lane miles of pavement on the NHS. Signal and other improvements included in the project may improve reliability on unreliable NHS segments within the project corridor and potentially reduce PHED. The project will improve sidewalks and provide bicycle accommodations; these features are expected to increase non-SOV travel. This project is expected to reduce CO_2 and other transportation-related emissions.
Wilmington– Intersection Improvements at Lowell Street (Route 129) and Woburn Street	Intersection Improvements	Improve traffic safety and efficiency at the intersection of Lowell Street (Route 129) and Woburn Street by making geometric modifications to the roadway, installing new pedestrian signals, adding crosswalks, and providing bicycle lanes.	Wilmington	2023	Under construction	The project area overlaps a 2017–19 all-mode HSIP crash cluster location and the project is expected to improve safety performance, including for bicyclists and pedestrians. It will improve more than half of a lane mile of pavement on the NHS. Signal and geometric improvements included in the project may improve reliability on unreliable NHS segments within the project area and potentially reduce PHED. The project will improve existing sidewalks, and it is expected to add new sidewalks and bicycle lanes, all of which may encourage non-SOV travel. The project is expected to reduce CO_2 and other transportation-related emissions.

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Winthrop–Revere Street Roadway Improvements	Complete Streets	Reconstruct and reclaim pavement; reconstruct sidewalks; and improve intersections and bicycle and pedestrian accommodations in the project corridor.	Winthrop	2023	Under construction	The project area is expected to improve safety performance, including for bicyclists and pedestrians. It will improve more than a mile of substandard sidewalks and add bicycle accommodations, which may encourage non-SOV travel. It is expected to reduce CO_2 and other transportation-related emissions.
Boston Electric Bluebikes Adoption	Community Connections	Purchase of 272 electric bikes (e-bikes) and 136 spare batteries for the City of Boston's Bluebikes network	Boston	2024	Contract advertised	This project is part of a larger regional investment in modernizing and expanding the regional Bluebikes bikeshare system and network, in addition to integrating electric vehicles to improve the accessibility and versatility of the network for all users.
Cambridge Electric Bluebikes Adoption	Community Connections	Purchase of 90 new e-bikes and 45 spare batteries for the City of Cambridge's Bluebikes network.	Cambridge	2024	Contract advertised	This project is part of a larger regional investment in modernizing and expanding the regional Bluebikes bikeshare system and network, in addition to integrating electric vehicles to improve the accessibility and versatility of the network for all users.
Canton Public Schools Bike Program	Community Connections	Installation of bidirectional bicycle lanes on Dedham Street. Purchase and installation of bicycle racks at three elementary schools, one middle school, and one high school.	Canton	2024	Not yet implemented	This project will reduce CO_2 emissions by providing new bicycle storage facilities for students of Canton's public schools to encourage mode shift. The project will complement additional municipal investments in the bicycle network to provide for safe travel for vulnerable roadway users.
Canton Center Bicycle Racks	Community Connections	Purchase and installation of bicycle racks in downtown Canton and at the Canton Center MBTA station.	Canton	2024	Not yet implemented	This project reduces CO_2 emissions by adding new bicycle parking facilities at key commuter rail facilities in downtown Canton to better accommodate intermodal connectivity.
Columbus Ave Bus Lane – Phase 2	Transit Modernization	Building on Phase 1, Phase 2 of the project includes bus-only lanes, transit signal priority, improvements to bus stops and shelters along Columbus Avenue and Tremont Street, and enhanced pedestrian and bicycle connections. New project elements include green infrastructure to promote traffic calming and reduce impervious surfaces.	Boston	2024, 2025	Not yet implemented	The project improves bus transit along Columbus Avenue in Boston to provide for rapid and reliable connectivity for bus routes running parallel to the MBTA's Orange Line facilities. This project also establishes connections into those facilities for buses, and improves bicycle and pedestrian safety along the route.
Jackson Square Station Accessibility Improvements	Transit Modernization	Includes construction of new elevator, modernization of existing elevator, lighting improvements, and various state-of-good-repair improvements to the station.	Boston	2024, 2025	Not yet implemented	This project provides for the maintenance and modernization of existing rapid transit facilities to encourage mode shift and support system reliability for the MBTA's Orange Line.
Littleton–Reconstruction of Foster Street	Complete Streets	Add turning lanes, consolidate curb cuts, and improve bicycle, pedestrian, and vehicular accommodations in the project corridor	Littleton	2024	Design Complete	The project is expected to improve safety performance, including for bicyclists and pedestrians. It will include a shared-use path, which is expected to increase non-SOV travel. This project is also expected to reduce CO_2 and other transportation-related emissions

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Lynn - Broad Street Corridor Transit Signal Priority	Community Connections	Upgrade traffic signal equipment at seven signalized intersections to improve safety and efficiency for all modes of transportation along one of the busiest corridors in Lynn.	Lynn	2024	Not yet implemented	This project will reduce SOV travel and CO_2 emissions by making transit improvements that improve the reliability and operability of multiple MBTA bus routes along a high-priority bus transit corridor in Lynn.
Medford Bicycle Parking – Tier 1	Community Connections	Purchase and install 40 bicycle racks to create 80 additional bicycle parking spaces	Medford	2024	Not yet implemented	This project implements additional bicycle parking at numerous areas throughout Medford to facilitate active transportation usage at key public spaces and commercial centers.
Medford Bluebikes Expansion	Community Connections	Purchase and installation of four Bluebikes docks and 25 Bluebikes for the City of Medford's Bluebikes network	Medford	2024	Not yet implemented	This project invests in the expansion of the regional bikeshare network, including additional expansion of Medford's Bluebikes facilities to provide for additional connections in MBTA rapid transit facilities.
MWRTA CatchConnect Microtransit Service Expansion Phase 2	Community Connections	Expansion of the CatchConnect microtransit program within the municipalities of Framingham and Natick on weeknights during evening hours. CatchConnect would be available within these communities between approximately 7:30 PM and 10:30 PM Monday through Friday, providing a supplemental public transportation resource following the conclusion of traditional fixed-route service.		2024, 2025	Service in operation	This project will reduce CO_2 emissions by reducing SOV travel and by providing for expanded service hours and area for microtransit.
Peabody Independence Greenway Extension	Bicycle and Pedestrian	Extend the Independence Greenway from the North Shore Mall to central Peabody	Peabody	2024, 2025	Advertised for construction	This project is expected to improve safety for bicyclists and pedestrians. It will create more than a mile of bike trail network and bring the Independence Greenway's total length to eight miles. By extending the region's bicycle network, this project is expected to increase non-SOV travel. It is also expected to reduce CO_2 and other transportation-related emissions.
Rail Transformation – Early Action Items – Reading Station and Wilbur Interlocking	Transit Modernization	Addition of a turn track at Reading Station and improvements to the siding at Wilbur Interlocking on the Lowell Line to enable 30 minute headways in the short term and higher frequencies with electrified rolling stock. Improvements would reduce conflicts with freight and the Amtrak Downeaster while facilitating bus integration.		2024, 2025	Project under design	This project maintains commuter rail facilities and provides for additional signal and track improvements to increase the capacity of rail infrastructure. These capacity enhancements allow for reductions in headways and establish a foundation for future electrification efforts for the rail network.
Arlington- Installation of 123 Bicycle Racks and Related Materials	Community Connections	This project will install 123 bike racks (246 spaces total) at commercial centers, schools, parks, fields, and playgrounds around Arlington. Some planned locations include Arlington Center, Ed Burns Arena, Spy Pond Field, Arlington High School, and other parks, open space locations, and middle and primary schools throughout the town.	Arlington	2025	Not yet implemented	The project improves, expands, and replaces bicycle infrastructure at key areas in the Town of Arlington to promote usage of bicycles, including among children who may attend any of the many schools served by this project.

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Boston - Bluebikes Station Replacement and Electrification, 12 Stations	Community Connections	This project will replace 10 aging bike-share stations, with two stations selected to pilot electrification to lower operational costs of battery swaps for newly adopted e-bikes. For the replacements, the City of Boston selected five high-use stations (10,000 or more trips per year) and five stations that are in areas close to low-income housing and/or in census tracts with a high number of car-free households, and Boston will identify two stations to pilot integration into the electrical grid.	Boston	2025	Not yet implemented	This project will improve the state of good repair of the existing bikeshare system to ensure continued access to bikeshare and empower municipalities to utilize local resources towards supporting operating costs for the bikeshare system.
Boston – Repurposing Single Space Parking Meter Poles for 1,600 Bicycle Racks	Community Connections	The City of Boston proposes the installation of 1,600 bike racks (3,200 bike parking spaces). These racks are fabricated to slide over existing parking meter poles as part of an ongoing effort by the City to replace all 6,000 single-space parking meters in Boston with multi-space meter kiosks. This project would dramatically increase bicycle parking in Boston's busiest commercial and job centers.	Boston	2025	Not yet implemented	This project strategically repurposes parking infrastructure in an ongoing modernization effort by the City of Boston to improve bicycle parking accommodations at a large volume of sites across the city.
Brookline – Bluebikes State of Good Repair, 3 Stations and 62 Pedal Bikes	Community Connections	The Town of Brookline will replace three Bluebikes stations at Beacon and Centre Streets, Beacon at Tappan Street, and Brookline Village–Station Street, as the stations have reached the end of their useful life. The stations at Coolidge Corner and Brookline Village have the greatest ridership within Brookline's network. These sites offer connections to multiple MBTA Green Line stations and bus routes, including the C and D Branches of the Green Line and the Route 66 and 65 high-frequency bus routes. The project will also replace 62 pedal bicycles that have reached the end of their useful life.	Brookline	2025	Not yet implemented	This project improves the state of good repair of the existing bikeshare system to ensure continued access to bikeshare and empower municipalities to utilize local resources towards supporting operating costs for the bikeshare system.
Cambridge – Bluebikes State of Good Repair, 8 Stations and 65 Pedal Bikes	Community Connections	The City of Cambridge will replace eight Bluebikes Stations that have reached the end of their useful life. These stations include Central Square at Massachusetts Avenue and Essex Street, Lafayette Square at Massachusetts Avenue and Main Street, Lower Cambridgeport at Magazine Street, One Broadway/Kendall Square at Main Street, Harvard University Housing at Peabody Terrace, Harvard University River Houses at DeWolfe Street, Linear Park at Massachusetts Avenue and Cameron Avenue, and Porter Square Station. The City further proposes the replacement of 65 pedal bicycles that have reached the end of their useful life.	Cambridge	2025	Not yet implemented	This project improves the state of good repair of the existing bikeshare system to ensure continued access to bikeshare and empower municipalities to utilize local resources towards supporting operating costs for the bikeshare system.

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CATA – Vehicle Replacement (4 Vehicles)	Transit Transformation	This project will replace four vehicles in CATA's bus fleet that have reached the end of their useful life, with two vehicles reaching the end of their lifecycle in 2022 and two in 2023. The vehicles will be procured using an existing option for purchase of diesel-electric hybrid buses.		2025	Not yet implemented	This project will facilitate the transition of vehicles in CATA's fleet towards cleaner sources of energy while also maintaining a robust state of operability.
CATA – Fare Upgrades for ADA and Dial-A-Ride Customers	Transit Transformation	This project will incorporate cashless payment for ADA and dial-a-ride customers of CATA's services to improve accessibility for the system.		2025	Not yet implemented	This line item provides funding to support access to transit services for persons with disabilities.
Chelsea-Revere – Regional On Demand Microtransit Pilot Project	Community Connections	The Cities of Chelsea and Revere will implement a microtransit service that will provide regional, low-cost, on-demand transportation across a 6.5 square mile zone in Chelsea and Revere. The service will offer convenient pick-up and drop-off services that align with riders' schedules, filling first- and last-mile gaps in the existing transit system and ensuring accessibility to critical destinations, such as grocery stores, healthcare facilities, places of employment, and educational institutions. The applicants estimate 58 passenger trips per day with electric vehicles. As a Microtransit Pilot Project, the project is proposed for funding across three years with $499,649 in FFY 2025, $450,278 in FFY 2026, and $463,807 in FFY 2027.	Chelsea, Revere	2025	Not yet implemented	This project provides new transit service to reduce transportation-related emissions by promoting shifts away from single occupancy vehicles.
Malden – Canal Street Bicycle Lanes	Community Connections	This project will implement a new separated bicycle lane along Canal Street from Medford Street to Centre Street in Malden. The on-road bicycle lanes on this moderately trafficked street will connect users to commercial sites, recreational facilities, public assets, and transit facilities. The project further expands the developing Malden Bike Network and provides connectivity to the planned Spot Pond Brook Greenway project (#613088).	Malden	2025	Not yet implemented	This project implements safe bicycle lanes to improve connectivity to local urban trails and mirror improvements proposed by neighboring municipalities.
MBTA - Central Square Station Accessibility Improvements (Cambridge)	Transit Transformation	This project will construct two redundant elevators and modernize the existing outbound elevator. The current elevator is one of the most unreliable elevators in the MBTA system. The opposite, inbound elevator was fully modernized in 2020.	Cambridge	2025	Not yet implemented	This project maintains and improves the accessibility of a rapid transit facility on the MBTA's Red Line. Improvements are focused on one of the most unreliable elevators in the transit system.
MBTA– Nubian Square Accessibility and Operational Improvements (Boston)	Transit Transformation	This project will construct accessible passenger platforms at Nubian Station to reverse direction of MBTA buses and leverage the City of Boston's street network improvements for increased service efficiency. The project improves signals, striping, and adjusts the curb.	Boston	2025	Not yet implemented	This project reduces travel times and improves safety for bus riders and other users of Nubian Station in Boston's Roxbury neighborhood.

Project Name	Project Category	Project Description	Municipalities	Obligation Years	Implementation Status	Relationship to CMAQ Performance Measure
MWRTA – Procurement of Three 29-Foot Buses	Transit Transformation			2025	Not yet implemented	This line item will support improvements to the accessibility of MWRTA's transit services and the transition of its fleet towards low-no emission vehicles.
MWRTA – Blandin Hub Equitable Redesign Initiative	Transit Transformation	This project will design and engineer improvements to the MetroWest Regional Transit Authority's Blandin Hub facility, the MWRTA's primary operations and maintenance building and a key passenger transportation hub. The Blandin Hub may be upgraded to feature an ADA-accessible driver dispatch and driver area within the operations facility, upgrades to electrical systems and HVAC energy recovery, restrooms, and driver amenities for a new training facility and expanded vehicle bays. The design will expand the customer waiting and transfer area to include a weather-enclosed waiting space in addition to other rider amenities.		2025	Not yet implemented	This project will design transformative improvements for passenger facility and MWRTA employee operations at its Blandin Hub. These improvements will enhance the accessibility, comfort, and efficiency of MWRTA's facility while also enabling improvements towards clean energy generation and fleet conversion goals held by the MWRTA.
Revere – Bluebikes Expansion to Northern Strand (Salem Street at North Marshall Street) and Griswold Park	Community Connections	The City of Revere will install new Bluebikes stations at Griswold Fields at Washington and Malden, and at North Marshall and Salem Street. The project will also procure an additional 40 pedal bicycles for the Bluebikes network. The North Marshall and Salem Street site is adjacent to the Northern Strand Community Trail, which connects Everett to Lynn with 11 miles of continuous off-road paved surface. The City of Revere has two trailheads, and its main trail head is 1/10 of a mile from the city’s second Amazon Distribution Center.	Revere	2025	Not yet implemented	This project expands the regional bikeshare system to promote non-single-occupancy modes of transportation, and does so near the urban trail network in Revere.
Scituate - Installation of 25 Bicycle Racks	Community Connections	The Town of Scituate will procure 25 bicycle racks providing 50 spaces in North Scituate Village and Scituate Harbor, which are commercial hubs and public open-space facilities. The town centers are hubs for pedestrians and are linked by sidewalks to various areas of open space and recreation, along with shops, grocery stores, and co-working spaces.	Scituate	2025	Not yet implemented	This project improves bicycle parking in a community in need of additional resources to accommodate and promote bicycle use.
Somerville – Bluebikes State of Good Repair, 13 Stations	Community Connections	The City of Somerville proposes replacing 13 Bluebikes stations that have reached the end of their useful life. These stations include Somerville City Hall, Union Square Station, Beacon Street at Washington Street, Conway Park, Wilson Square, Davis Square, Ball Square, Powder House Circle/Nathan Tufts Park, Packard Avenue, Teele Square, 191 Beacon Street, Perry Park, and Broadway at Mount Pleasant Street.	Somerville	2025	Not yet implemented	This project improves the state of good repair of the existing bikeshare system to ensure continued access to bikeshare and empower municipalities to utilize local resources towards supporting operating costs for the bikeshare system.

Project Name	Project Category	Project Description	Municipalities	Obligation Years	Implementation Status	Relationship to CMAQ Performance Measure
Woburn–Intersection Reconstruction at Route 3 (Cambridge Road) and Bedford Road and South Bedford Street	Intersection Improvements	Reconstruct the intersection and all traffic signal equipment. Enhance roadway geometry to provide exclusive turn lanes for intersection approaches. Reconstruct existing sidewalks, construct new sidewalks, and add bicycle lanes and ADA-compliant bus stops, where feasible.	Woburn	2025	Not yet implemented	The project is expected to improve safety performance, including for bicyclists and pedestrians. The project is expected to improve existing sidewalks and add new sidewalks at the intersection, as well as add new bike lanes; all of these features may encourage non-SOV travel. The geometric improvements included in the project are expected to help reduce delay and potentially PHED on nearby NHS routes. The project is expected to reduce CO_2 and other transportation-related emissions.

4 FUTURE PLANS AND PROGRESS REPORTS

In CY 2026, Boston Region MPO staff may prepare a Full Performance Period CMAQ Progress Report for the second performance period in accordance with FHWA applicability determinations and other requirements. This final progress report will describe four-year performance for the federally required CMAQ performance measures, along with updates about CMAQ-funded projects in the Boston region and their expected impacts on performance with respect to CMAQ measures and targets.

5 CONTACT INFORMATION

Questions pertaining to this Boston Region MPO CMAQ Performance Plan can be addressed to Sam Taylor of the Boston Region MPO staff. Staff contact information is available at https://www.bostonmpo.org/ctps_staff.

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