



TECHNICAL MEMORANDUM

DATE: January 29, 2021
TO: Andrew Brennan, Massachusetts Bay Transportation Authority
FROM: Scott A. Peterson, Central Transportation Planning Staff
Steven P. Andrews, Central Transportation Planning Staff
RE: Forging Ahead: Air Quality and Environmental Justice Analysis

Due to the COVID-19 pandemic, the Massachusetts Bay Transportation Authority (MBTA) is planning to adjust its service levels to better address the significant drop in ridership that has occurred and to hold resources in reserve to ensure that the MBTA is able to continue to provide key service to critical workers who have continued to rely on transit during the course of the pandemic.

The MBTA will make significant service reductions beginning in spring 2021 and an additional set of changes in summer 2021. These changes, part of the Forging Ahead initiative, will exceed the MBTA's major service change threshold.

As a recipient of federal funds through the Federal Transit Administration (FTA), the MBTA is required to comply with Title VI of the Civil Rights Act of 1964 (Title 49, part 21, Code of Federal Regulations). The FTA provides guidance to its subrecipients for carrying out Title VI obligations in Circular 4702.1B. This circular includes a requirement for large transit providers to conduct a Title VI service equity analysis to evaluate, prior to implementing any major service change, whether the planned change would have a discriminatory impact on the basis of race, color, or national origin.

Although low-income populations are not a protected class under Title VI, the FTA also requires transit providers to determine whether low-income populations would bear a disproportionate burden from a proposed major service reduction. Traditionally, the Central Transportation Planning Staff (CTPS) of the Boston Region MPO has conducted service equity analyses for the MBTA.

In addition, Massachusetts General Law, Part I, Title XXII, Chapter 161A, Section 5 describes the limitations, conditions, obligations, and duties of the MBTA. Part (d) of this section requires the MBTA to take the following actions prior to a decrease in service of 10 percent or more:

Civil Rights, nondiscrimination, and accessibility information is on the last page.

- hold one or more public meetings about the proposed changes
- have the MBTA Advisory Board review the proposed changes
- complete an environmental notification form (ENF) that includes an evaluation of the potential environmental impacts

CTPS conducted an environmental analysis to support the ENF that will be submitted to the Massachusetts Environmental Policy Act (MEPA) Office. The environmental analysis examined the equity implications of the service changes and reviewed regional air quality impacts.

Summary of Results

The results of CTPS’s air quality and environmental justice analyses indicate that the MBTA’s Forging Ahead service changes will result in a reduction of emissions compared to the service the MBTA planned to operate in spring 2020. Further, CTPS did not identify disparate impacts to populations classified as minorities or disproportionate burdens to populations classified as low-income related to the reduction in revenue vehicle hours of service.

The remainder of this memo documents the detailed results, assumptions, and methodology used to support these conclusions.

1 PLANNED SERVICE LEVEL CHANGES

A detailed description of the service change proposal and how the MBTA derived the proposed changes can be found in the [“Forging Ahead: Service Proposal”](#) presented at the Fiscal and Management Control Board’s (FMCB) December 14, 2020 meeting.¹ The following is a summary of the proposed changes to the MBTA’s fixed-route modes:

Bus	<ul style="list-style-type: none"> • Suspend 20 routes, consolidate 16, shorten four, and operate a few routes during peak times only (many of these changes are already in effect as part of COVID schedules) • 20 percent frequency reduction to non-essential routes • Five percent frequency reduction to essential routes
Rapid Transit	<ul style="list-style-type: none"> • 20 percent frequency reduction to Green, Orange, and Red Lines • As much as five percent frequency reduction to Blue Line

¹ www.mbta.com/events/2020-12-14/fiscal-and-management-control-board-meeting and cdn.mbta.com/sites/default/files/2020-12/2020-12-14-fmcb-F-forging-ahead-service-proposal.pdf

Commuter Rail	<ul style="list-style-type: none"> • Maintain partial weekend service on the Worcester, Providence, Newburyport/Rockport, Middleboro and Fairmount branches; suspend weekend service on all other branches • End weekday service at 9:00 PM • Reduce peak and weekday service • Close five stations (Plimptonville, Prides Crossing, Silver Hill, Hastings, and Plymouth)
Ferry	<ul style="list-style-type: none"> • Suspend Charlestown and Hingham direct service • Reduce weekday Hingham/Hull ferry service

2 AIR QUALITY ANALYSIS

2.1 Methodology

In previous analyses of changes to the MBTA's service levels and fares to support the ENF, CTPS used its regional travel demand model set to develop inputs into the equity analysis and develop estimates of emissions of criteria pollutants and greenhouse gases. Since the travel demand model utilizes data on travel patterns, ridership, and surveys that are not representative of current COVID conditions, a sketch-level planning analysis was used to develop estimates of emissions of criteria pollutants and greenhouse gases to support this ENF.

The sketch-level planning analysis involved two components:

- **Transit Vehicles:** Changes in the number of and type of transit vehicles in operation and lower service levels will lead to a decrease in transit vehicle emissions.
- **Auto Diversions:** Reductions in service levels will lead to reduced ridership and diversions to autos. These diversions will lead to an increase in emissions due to additional auto passenger vehicle-miles of travel (VMT) on the roadways.

The analysis examined a baseline condition of MBTA transit service—the planned service for spring 2020 prior to the COVID emergency—and compared it to the proposed service plans representing the total changes through spring and summer of 2021.

The emissions were estimated for five pollutants and one greenhouse gas: volatile organic compounds (VOCs), nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter (PM), and carbon dioxide (CO₂).²

2.2 Transit Vehicles

The MBTA service level changes will affect all of the MBTA's transit modes: bus, rapid transit, commuter rail, and ferry. Each mode has a unique set of service changes and impacts to the type of engine technology used.

Bus

The goal of the bus analysis is to quantify the change in revenue-miles by engine technology for the bus routes that are changing. Four bus technology types were examined:

- Diesel fuel buses (mobile source)
- Compressed natural gas buses (mobile source)
- Hybrid buses (mobile source)
- Electric buses

The MBTA provided CTPS with the revenue mileage for planned spring 2020 and spring 2021. The bus mode is the sole mode with changes planned for summer 2021. The MBTA provided the summer 2021 revenue mileage changes as a change from spring 2021. CTPS applied this change to the spring 2021 revenue mileage to obtain a summer 2021 set of values to compare against the planned spring 2020 schedule.

CTPS attributed changes to mileage by garage and technology types based on the MBTA's proposed plans.

Rapid Transit

The rapid transit lines, consisting of heavy and light rail, will all experience service level changes. These vehicles obtain their power from either a third rail or catenary that is fed from a stationary source. The MBTA provided CTPS with the revenue mileage associated with planned spring 2020 and spring 2021 service plans. The emissions from the stationary sources were not included in the analysis because Massachusetts expects to use clean power sources and changes to the rapid transit system will not have any significant impact on emissions due to the clean energy sources.

² In most cases, CTPS estimated PM_{2.5} which is about 98 percent of particulate matter. The analysis of ferry and commuter rail service also included PM₁₀.

Commuter Rail

Many of the commuter rail lines will experience significant service level changes. The MBTA will eliminate weekend service on many of its lines. The MBTA provided CTPS with mileage by locomotive tier, a classification denoting how effectively different engines limit certain emissions, for its planned spring 2020 schedule and spring 2021 schedules. Using the spring 2020 values, CTPS estimated a weighted average tier of 1.5 for the fleet. This corresponds well with the average the FTA uses in its New Starts guidance.³

CTPS assumed that the MBTA would remove the older and most polluting locomotives, namely Tier 0 and Tier 1, when it reduced service levels. To account for the effects of selectively removing the older locomotives, the emission rate factors used for the remaining commuter rail locomotives were scaled down by five percent.

Ferry Service

The MBTA provides ferry service connecting Hingham, Hull, and Charlestown to Boston. The MBTA provided data on revenue mileage for planned spring 2020 and spring 2021 schedules that were matched to emission rates developed specifically for the boat types and engine power serving these routes.

2.3 Auto Diversions

The MBTA provided CTPS with recent ridership data to establish the baseline that would be used for comparing the ridership losses related to the service level reductions. The MBTA suggested using recent, typical pre-COVID ridership as the baseline, which was broken out temporally and by mode. The temporal breakdowns were by weekday, month, and year. The next step was to utilize the percent change in ridership by mode resulting from the proposed service level changes based on a set of elasticity factors the MBTA derived from previous fare and service level cuts. These percentage reductions were applied to the baseline ridership to understand the magnitude of ridership losses by mode. These assumptions represent a conservative estimate of auto diversions—diversions, and their associated emissions, will likely be lower than those used in this analysis.

CTPS used the American Public Transportation Association's (APTA) Standards Development Program Recommended Practice Guide, APTA SUDS CC-RP-001-

³ Federal Transit Administration, *Proposed New Starts and Small Starts Policy Guidance*, January 9, 2013.
www.transit.dot.gov/sites/fta.dot.gov/files/docs/NewStartsPolicyGuidance.pdf

09, Rev. 1, to develop mode-shift factors.⁴ The mode-shift factors were used to quantify what happens to trips following a service change and answer the question, “Do riders shift to a nonmotorized mode, do they refrain from making the trip, or do they shift to a passenger vehicle?” After the number of auto diversions were identified by mode, an average transit trip length derived from the National Transit Database (NTD) was used to estimate the amount of new VMT. The VMT was then used along with an assumed speed of 25 miles per hour to match with emission factors derived from MOVES 2014b 2020 outputs by roadway type in Middlesex County.⁵ The highest value of grams per mile were based on summer and winter emission rates for each pollutant in this analysis.

2.4 Emissions by Vehicle Type

Table 1 summarizes the emission values by technology type used in this analysis.

⁴ American Public Transportation Association, *Quantifying Greenhouse Gas Emissions from Transit* (SUDS CC-RP-001-09, Rev. 1). September 10, 2018.

⁵ US Environmental Protection Agency, MOVES2014, MOVES2014a, and MOVES2014b Technical Guidance, EPA-420-B-18-039, August 2018. “MOVES (MOtor Vehicle Emissions Simulator) is a state-of-the-art model designed by the US Environmental Protection Agency (EPA) to estimate air pollution emissions from mobile sources.”

**Table 1
Emission Factors by Technology Type
(in Grams per Vehicle-Mile Travelled)**

Vehicle Type	Source	VOCs	NO _x	CO	CO ₂	PM
Passenger vehicle	1	0.04	0.01	2.35	402	0.01
Bus (low-sulphur diesel)	2	0.24	2.08	3.26	2,680	0.09
Bus (CNG)	2	1.15	3.41	20.30	2,364	0.01
Bus (hybrid)	2	0.24	2.08	3.26	2,212	0.09
Bus (electric)	2	0.10	4.39	5.39	1,078	0.31
Commuter rail (spring 20)	2, 3, 4	0.55	13.20	16.80	40,868	0.19
Commuter rail (summer 21)	N/A	0.52	12.54	15.96	38,825	0.18
Ferry boat	5, 6, 7	10.90	1,117.33	75.00	25,543	46.95

Note: CTPS used summer passenger vehicle emission factors for VOCs, CO, and CO₂. CTPS used winter passenger vehicle emission factors for NO_x and PM.

CNG = compressed natural gas. CO = carbon monoxide. CO₂ = carbon dioxide. N/A = Not applicable. NO_x = nitrogen oxide. PM = particulate matter. VOCs = volatile organic compounds.

Sources:

- 1) MOVE2014b:s Middlesex County. Vehicle speed = 25 miles per hour.
- 2) Federal Transit Administration Proposed New Starts and Small Starts Policy Guidance, January 9, 2013.
- 3) Emission Factors for Locomotives (EPA-420-F-09-025) April 2009.
- 4) Air Quality Assessment: Plaistow Commuter Rail Extension Study. HDR. March 17, 2015.
- 5) US Environmental Protection Agency Current Methodologies in Preparing Mobile Source Port-Related Emission Inventories Final Report. US Environmental Protection Agency. April 2009.
- 6) Scoping Study to Evaluate the Emissions of Harbor Craft Operating in Boston Harbor and Potential Control Options, NESCAM, April 2016. Category 2-Harbor Craft.
- 7) Federal Marine Compression-Ignition Engines: Exhaust Emission Standards (EPA-420-B-20-021). July 2020.

2.5 Final Air Quality Results

CTPS multiplied the change in miles traveled by technology type (for example, hybrid bus or commuter rail locomotive) by the emission factors noted in Table 1 to estimate the reduction in emissions resulting from reducing transit VMT.

CTPS then developed an estimate of the number of riders who would choose to travel by auto because of the proposed service level changes. Based on mode-level NTD data, CTPS estimated average trip lengths. These new auto VMT were multiplied by the corresponding emissions factors to develop an estimate of the increase in emissions resulting from auto diversions. These values were combined to derive the net effect on regional emissions.

The final results, shown in Table 2, are estimates of the annual change in select emissions between the spring 2020 baseline and the proposed service cuts through summer 2021. These estimates reflect both the reduction in emissions resulting from a concomitant reduction in transit VMT and the increase in emissions resulting from diversions to autos.

**Table 2
Summary of Annualized Regional Air Quality Impacts (in Kilograms)**

	VOCs	NO _x	CO	CO ₂	PM
Base emissions: spring 2020	13,096	202,485	240,713	258,814,415	6,297
Forging Ahead emissions: summer 2021	11,334	138,669	232,537	202,238,758	4,158
Net air quality impacts	-1,762	-63,817	-8,176	-56,575,657	-2,138
Decrease in transit VMT	-2,269	-63,961	-42,001	-62,374,095	-2,222
Increase in auto VMT	508	144	33,825	5,798,438	84
Percent change	-13%	-32%	-3%	-22%	-34%

CO = carbon monoxide. CO₂ = carbon dioxide. NO_x = nitrogen oxide. PM = particulate matter. VOCs = volatile organic compounds. VMT = vehicle-miles traveled.
Source: CTPS analysis of MBTA data.

3 EQUITY ANALYSIS

3.1 Evaluation of Adverse Impacts

The MBTA defines adverse effects as changes to

- the amount of service scheduled, by route and by mode, as measured by changes to weekly revenue-vehicle hours (RVH); and
- access to the service, by route, as measured by changes to route length.

In accordance with the MBTA’s Disparate Impact/Disproportionate Burden (DI/DB) Policy, the MBTA analyzes the changes to RVH and route length as relative and absolute changes.⁶ CTPS also measures the relative share of the burden, which compares the protected population group’s share of the net benefit or burden relative to its existing share of the metric.

⁶ Massachusetts Bay Transportation Authority, *MBTA Disparate Impact/Disproportionate Burden (DI/DB) Policy*, January 30, 2017.

For this environmental justice analysis, CTPS focused on the effects on RVH rather than RVH and route length. CTPS is currently reconciling implementation issues when the route length metric is applied to a systemwide change. Given the specific nature of the proposed changes—outright eliminations of many express bus routes, commuter rail lines, and ferry lines combined with smaller, generally coverage-maintaining changes to some bus routes—CTPS does not expect the comparative changes to route length to create disparate impacts or disproportionate burdens.

3.2 Analysis Framework

Demographic Datasets

CTPS, in consultation with the MBTA, chose to use the 2015–17 MBTA Systemwide Passenger Survey dataset instead of the United States Census Bureau’s American Community Survey and US census data because the vast majority of the changes the MBTA is proposing are changes to service levels rather than route structure.

Definitions of Minority and Low-Income Populations

Minority status was determined based on the answers to the race and ethnicity survey questions. Respondents were classified as having minority status if they self-identified as a race other than white and/or as Hispanic or Latino/Latina. Respondents were classified as not having minority status if they self-identified solely as white and not Hispanic or Latino/Latina. All other respondents could not be classified and were not included in the calculation of minority percentages. The systemwide survey minority percentage was 34 percent.

Low-income status was determined for respondents who provided their household income. Household incomes of less than \$43,500 were classified as low income. The low-income threshold was set at 60 percent of the median household income for the MBTA service area from the 2013 American Community Survey. Respondents who did not answer the household income question or selected “prefer not to say” could not be classified and were not included in the calculation of low-income percentages. The systemwide survey low-income percentage was 29 percent.

The Comparison Population

In this analysis, the comparator is the amount of each metric, RVH, and route-miles of service, attributed to each population.

The Effects of COVID-19 on Rider Demographics

The impact of the COVID-19 pandemic on ridership varies by demographics and mode. While the 2015–17 MBTA Systemwide Passenger Survey is the premier dataset for rider demographics, it describes pre-pandemic rider demographics and may no longer be representative of current riders. To address this issue, the demographics of riders on each route were assigned in two ways.

The first method (“proportionate allocation”) uses demographic data directly from the survey and allocates a metric (revenue-vehicle hours or route-miles) by the percent of a demographic by route. For example, every week Route 1 operated 1,325 RVH and 37 percent of its riders were classified as minorities. For this route, 490 RVH ($1,325 * 0.37$) were allocated to riders classified as minorities.

The second method (“full allocation”) assigns each route a classification based on whether it is above or below the systemwide average for each demographic. All of a given metric is attributed to the group. Continuing the above example, according to the 2015–17 MBTA Systemwide Passenger Survey, 34 percent of systemwide riders were classified as minority riders. Because the ratio of riders classified as minority riders on Route 1 (37 percent) is greater than 34 percent, all 1,325 RVH were allocated to minority riders. Under the full allocation method, Route 1 would be classified as a minority route.

The proportionate allocation method allows the allocation of route metrics to vary between routes and more precisely captures each route’s unique demographic profile. However, this method is limited by the, likely false, assumption that the COVID-19 pandemic has not significantly altered rider demographics since the survey was conducted. The full allocation method addresses this limitation by acknowledging that while the precise demographics of current riders are unknown, route *classifications* are likely to remain stable. Most pre-COVID low-income and minority routes probably remain low-income and minority routes post-COVID. This method sacrifices some precision by “hiding” the variation within low-income and minority routes, but since the accuracy of this variation is questionable the results are likely a better representation of reality.

3.3 Change in Weekly Revenue-Vehicle Hours

Using the proportionate allocation method described above, CTPS estimated the existing RVH by rider classification and the change in RVH from the planned spring 2020 schedule to the proposed summer 2021 schedule, as shown in Table 3.

Table 3
Net Change in Weekly Revenue-Vehicle Hours for Each Population Group
Based on All Types of Change: Proportionate Allocation

Population Group	Existing Hours	Share of Existing Hours	Net Change	Share of Net Change	Percent Change
Minority	28,231.6	41.7%	-3,307.5	31.1%	-11.7%
Nonminority	39,399.7	58.3%	-7,328.8	68.9%	-18.6%
Low-Income	24,825.0	36.7%	-2,959.8	27.8%	-11.9%
Non-Low-Income	42,806.3	63.3%	-7,676.5	72.2%	-17.9%

Sources: MBTA revenue-vehicle hour spreadsheets as processed by CTPS and 2015–17 MBTA Systemwide Passenger Survey.

Using the full allocation method described above, CTPS performed the same analysis, as shown in Table 4.

Table 4
Net Change in Weekly Revenue Vehicle Hours for Each Population Group
Based on All Types of Change: Full Allocation

Population Group	Existing Hours	Share of Existing Hours	Net Change	Share of Net Change	Percent Change
Minority	37,698.1	55.7	-4,003.4	37.6%	-10.6%
Nonminority	29,933.2	44.3	-6,632.9	62.4%	-22.2%
Low-Income	39,401.6	58.3	-4,144.2	39.0%	-10.5%
Non-Low-Income	28,229.6	41.7	-6,492.1	61.0%	-23.0%

Sources: MBTA revenue vehicle hour spreadsheets as processed by CTPS and 2015–17 MBTA Systemwide Passenger Survey.

Weekly Revenue Vehicle Hours: Disparate Impact/Disproportionate Burden Analysis

Table 5 summarizes the results of the service equity analysis relating to RVH changes according to the proportionate allocation methodology. As shown in Table 5, the results do not indicate a disparate impact to nonminority populations or a disproportionate burden to non-low-income populations.

**Table 5
Summary of DI/DB Results Relating to Revenue-Vehicle Hour Changes:
Proportionate Allocation**

Analysis Method	Impacts on Minority Populations	Impacts on Low-Income Populations
Absolute Change (Protected / Nonprotected)	No Disparate Impact Ratio: -3,308 / -7,329 < 120%	No Disproportionate Impact Ratio: -2,960 / -7,677 < 120%
Relative Change (Protected / Nonprotected)	No Disparate Impact Ratio: -11.7% / -18.6% < 120%	No Disproportionate Impact Ratio: -11.9% / -17.9% < 120%
Protected Share of Change / Protected Share of Existing Hours	No Disparate Impact Ratio: 31.1% / 41.7% < 120%	No Disproportionate Impact Ratio: 27.8% / 36.7% < 120%

Note: Values correspond to Table 1.

DI/DB = disparate impact/disproportionate burden.

Source: CTPS.

Table 6 summarizes the results of the service equity analysis relating to RVH changes according to the full allocation methodology. As shown in Table 6, the results do not indicate a disparate impact to nonminority populations or a disproportionate burden to non-low-income populations.

**Table 6
Summary of DI/DB Results Relating to Revenue-Vehicle Hour Changes:
Full Allocation**

Analysis Method	Impacts on Minority Populations	Impacts on Low-Income Populations
Absolute Change (Protected / Nonprotected)	No Disparate Impact Ratio: -4,003 / -6,633 < 120%	No Disproportionate Impact Ratio: -4,144 / -6,492 < 120%
Relative Change (Protected / Nonprotected)	No Disparate Impact Ratio: -10.6% / -22.2% < 120%	No Disproportionate Impact Ratio: -10.5% / -23.0% < 120%
Protected Share of Change / Protected Share of Existing Hours	No Disparate Impact Ratio: 37.6% / 55.7% < 120%	No Disproportionate Impact Ratio: 39.0% / 58.3% < 120%

Note: Values correspond to Table 2.

DI/DB = disparate impact/disproportionate burden.

Source: CTPS.

3.4 Change in Route Length

As noted earlier, this analysis focused on producing results for RVH. Impacts on route length will be explored in more detail in a formal Title VI service equity analysis to be presented to the MBTA’s board in late winter 2021. To provide some context for route-length impacts, Tables 7 and 8 provide a cursory summary of the demographics of routes that will have their service eliminated outright.

**Table 7
Summary of Route Eliminations by Weekly Route-Miles:
Proportionate Allocation**

Mode	Minority Route-Miles	Nonminority Route-Miles	Minority Share of Net Change	Low-Income Route-Miles	Non-Low- Income Route-Miles	Low-Income Share of Net Change
Bus	638	1,049	38%	641	1,046	38%
Rapid Transit	N/A	N/A	N/A	N/A	N/A	N/A
Commuter Rail	121	945	11%	69	997	6%
Ferry	4	215	2%	8	211	4%
Total	762	2,209	26%	718	2,254	24%

Note: No route-length changes are planned for the rapid transit system. Weekdays were weighted by “5” and weekend days were each weighted by “1.”

N/A = not applicable.

Source: CTPS.

**Table 8
Summary of Route Eliminations by Weekly Route-Miles:
Full Allocation**

Mode	Minority Route-Miles	Nonminority Route-Miles	Minority Share of Net Change	Low-Income Route-Miles	Non-Low- Income Route-Miles	Low-Income Share of Net Change
Bus	881	806	52%	830	856	49%
Rapid Transit	N/A	N/A	N/A	N/A	N/A	N/A
Commuter Rail	0	1,066	0%	0	1,066	0%
Ferry	0	219	0%	0	219	0%
Total	881	2,091	30%	830	2,141	28%

Note: No route-length changes are planned for the rapid transit system. Weekdays were weighted by “5” and weekend days were each weighted by “1.”

N/A = not applicable.

Source: CTPS.

As expected, given the strategies the MBTA used to determine the proposed service changes, the service reductions more significantly affect the nonprotected populations. Given that the other service changes through summer 2021 are comparatively minor, CTPS does not expect that a more detailed analysis would identify a potential disparate impact or disproportionate burden.

The Boston Region Metropolitan Planning Organization (MPO) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination under any program or activity that receives federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, Federal Transit Administration, or both, prohibit discrimination on the basis of age, sex, and disability. The Boston Region MPO considers these protected populations in its Title VI Programs, consistent with federal interpretation and administration. In addition, the Boston Region MPO provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with U.S. Department of Transportation policy and guidance on federal Executive Order 13166.

The Boston Region MPO also complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 sections 92a, 98, 98a, which prohibits making any distinction, discrimination, or restriction in admission to, or treatment in a place of public accommodation based on race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry. Likewise, the Boston Region MPO complies with the Governor's Executive Order 526, section 4, which requires that all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background.

A complaint form and additional information can be obtained by contacting the MPO or at http://www.bostonmpo.org/mpo_non_discrimination. To request this information in a different language or in an accessible format, please contact

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