



POLICY/PROCEDURE		
SUBJECT: Service and Fare Change Equity Policy	DATE OF ISSUE: April 19, 2023, amended October 24, 2023	APPROVED BY: Board of Directors, April 19, 2023, amended October 24, 2023

MBTA Service and Fare Change Equity Policy

Introduction

Under the authority of Title VI of the Civil Rights Act of 1964 (“Title VI”), Federal Transit Administration (“FTA”) Circular 4702.1B (“FTA Circular” or “Circular”) directs transit providers to define and set standards for analyzing the potential adverse effects of proposed major service changes and all proposed fare changes on protected populations. An equity analysis is conducted prior to implementing any such service or fare change to evaluate whether the proposed change is likely to have a disparate impact on populations protected on the basis of race or ethnicity¹, or place a disproportionate burden on low-income² populations. The Massachusetts Bay Transportation Authority (“MBTA”) follows this Service and Fare Change Equity Policy (“Policy”) in accordance with chapter IV, section 7 of the FTA Circular to assist with equitable and transparent decision-making and with the goal of fairly distributing the adverse impacts of and any burdens associated with fare and major service changes.

Scope and Applicability

This Policy applies to proposed changes to the MBTA’s fixed-route modes, including bus, light rail, heavy rail, commuter rail, and ferry. This Policy does not extend to paratransit service or any other demand-response mode that may be provided by or for the MBTA.

While analyses conducted pursuant to this Policy are intended to aid the MBTA in equitably distributing the adverse impacts of, and burdens associated with, fare and major service changes, the MBTA recognizes that equity is not inherent in the status quo. Consistent with federal requirements, the MBTA does not factor into its Title VI fare and service equity analyses induced demand, the benefits of quality improvements such as vehicle comfort, or the impact of fare increases relative to household income, notwithstanding the likelihood of such events. During the service planning process, however, the MBTA conducts “equity checks” to provide consistent monitoring of service levels provided to protected populations and to help inform and prioritize future service planning.

¹ FTA Circular 4702.1B provides that any individual who identifies as belonging in any one or more of the following US census categories is a member of a population that is protected from discrimination on the basis of race and/or ethnicity: American Indian and Alaska Native; Asian; Black or African American; Hispanic or Latino (of any race); Native Hawaiian or Other Pacific Islander.

² The MBTA defines low-income populations as those in which the median household income is less than 80% of the median household income for the MBTA service area (approximately \$82,000 in 2023 and subject to annual modification).

Policy Title	Supersedes	Page Number
MBTA Service and Fare Change Equity Policy	Disparate Impact/Disproportionate Burden (DI/DB) Policy of January 17, 2017	1 of 5

Definition of Major Service Change

The MBTA defines a Major Service Change as any addition, reduction, suspension or change in service lasting longer than 12 months consecutive and meeting one or more of the following criteria:

- A change of at least 10% in Revenue Vehicle Hours³ (RVH) per week by mode;
- A change of at least 25% in RVH per week by route⁴; or
- A change of at least 0.30% of the population covered by the entire network according to the base coverage standard established in the MBTA's Service Delivery Policy.⁵

These criteria are selected as most likely to yield a meaningful result in light of the MBTA's system characteristics. A Major Service Change occurs when one or more of the above thresholds are met within a single service change proposal, or within a package of concurrently proposed changes to be considered in the aggregate.

Disparate Impact or Disproportionate Burden

Before implementing a major service change or a fare change, the MBTA will conduct an equity analysis to determine whether the adverse effects of the proposed change will be borne unfairly by populations protected on the basis of race or ethnicity or by low-income populations.

The MBTA measures the adverse effects of a proposed service change involving either:

- An increase or decrease in the amount of service scheduled as measured by changes to weekly RVH; or
- An increase or decrease in base coverage as measured by changes to the percent of the population that lives within 0.5 miles of an MBTA stop or station.

The MBTA uses the following thresholds⁶ to determine whether the adverse effects of a proposed change will have a disparate impact or place a disproportionate burden on protected populations. The adverse effects of proposed service changes are measured as both the anticipated benefits (e.g., increases in service) and burdens (e.g., decreases in service) expected to accrue to protected and non-protected populations.

- **For major service changes**, a disparate impact or disproportionate burden will be deemed to have occurred if the ratio between the percentage change in service for protected and non-protected populations is greater than 1.20x for a service decrease or less than 0.80x for a service increase.

³ The total number of hours per week in which transit vehicles operate in revenue service.

⁴ Supplemental service that adds trips along pre-existing transit routes, such as school trips or weekend variations, are counted as part of the parent route.

⁵ The geographic extent of all MBTA services, some of which may be relatively infrequent for some or all of the service day as measured by the percent of the population that lives within 0.5 miles of a bus stop, rapid transit station, Commuter Rail station, or ferry dock in the MBTA service area, excluding municipalities that are members of a regional transit authority (RTA). The MBTA's Service Delivery Policy can be found at: <https://www.mbta.com/policies>

⁶ The non-zero DI/DB thresholds are meant to prevent false positives attributable to uncertainties in the data source, regardless of whether the data source is the US Census or most recent MBTA passenger survey.

Policy Title	Supersedes	Page Number
MBTA Service and Fare Change Equity Policy	Disparate Impact/Disproportionate Burden (DI/DB) Policy of January 17, 2017	2 of 5

$$\frac{\% \text{ change for protected population}}{\% \text{ change for non-protected population}} > 1.2 \text{ for a decrease in service}$$

$$\frac{\% \text{ change for protected population}}{\% \text{ change for non-protected population}} < 0.8 \text{ for an increase in service}$$

For example, if a major service change yields a 15% increase in service for riders protected on the basis of race or ethnicity and a 20% increase in service for non-protected riders, the ratio would be 0.75x, which is below the 0.80x threshold. This change would result in a disparate impact finding because it proposes to materially increase service more for non-protected populations than for protected populations.

- **For fare changes**, a disparate impact or disproportionate burden will be deemed to have occurred if the ratio between the percentage change in fares for protected riders and overall riders is greater than 1.10x for a fare increase or less than 0.90x for a fare decrease.

$$\frac{\% \text{ change for protected riders}}{\% \text{ change for overall riders}} < 0.9 \text{ for a decrease in fare}$$

$$\frac{\% \text{ change for protected riders}}{\% \text{ change for overall riders}} > 1.1 \text{ for an increase in fare}$$

For example, if a fare change yields a 20% increase in fares for riders protected on the basis of race or ethnicity and a 10% increase in fares for overall riders, the ratio would be 2.00x, which is above the 1.10x threshold. This change would result in a disparate impact finding because it proposes to materially increase fares more for protected riders than for overall riders.

Finding of Disparate Impact: Consistent with the FTA Circular, if the proposed change will have a disparate impact on riders or potential riders who are protected on the basis of race or ethnicity, the MBTA may only adopt the change upon demonstrating: (1) a substantial legitimate justification for the change; (2) there are no comparably effective alternatives that would result in less-disparate impacts; and (3) the justification for the change is not a pretext for discrimination.

Finding of Disproportionate Burden: If the proposed change will disproportionately affect low-income populations, whether by benefit or burden, the MBTA may only adopt the change if further mitigation measures or alternatives that would reduce the disproportionately high and adverse effects are not practicable. In determining whether a mitigation measure or alternative is practicable, the social, economic, and environmental effects of avoiding or mitigating the adverse effects shall be taken into account.

Policy Title	Supersedes	Page Number
MBTA Service and Fare Change Equity Policy	Disparate Impact/Disproportionate Burden (DI/DB) Policy of January 17, 2017	3 of 5

Service Equity Analysis

Due to the varying nature of proposed service and fare changes, the appropriate data to analyze in a given instance may vary from case to case. For a given service equity analysis, the MBTA will identify the data needed for analysis and the techniques and technologies used to collect the data, and the methodologies used in the Service Equity Analysis calculation. The MBTA may use, for example, the rider census to compare the ridership of the affected route(s) with the ridership of the system. The MBTA may seek technical assistance from the FTA as needed based on the circumstances.

Fare Equity Analysis

The MBTA will conduct a fare equity analysis before implementing any proposed change that would increase or decrease individual or system-wide fares, fares by mode, or fares by fare payment type or fare media.

A fare equity analysis compares the percentage change in the average fare for riders protected on the basis of race or ethnicity and overall riders and for low-income and overall riders. For changes resulting in a fare increase or decrease, the MBTA will assess whether protected riders are more likely to use the affected fare type, media, or mode than overall riders and what the potential cost impact would be to these riders. Concurrently proposed fare changes are considered in the aggregate.

The MBTA will not conduct a fare equity analysis for the following:

- “Spare the air” days or similar when the MBTA permits all passengers to ride for free;
- A temporary fare reduction offered as a mitigating measure for another action (e.g., a service diversion or construction activity that may close a route or part of a route);
- A promotional fare change that lasts less than 6 months;
- An administrative or process change in fare collection (e.g., transition to a new fare collection system) that will not yield an increase or decrease in fares.

Public Participation

Consistent with the MBTA’s Public Engagement Plan⁷, the MBTA will provide meaningful opportunity for public comment on:

- Proposed fare and major service changes and their respective equity analyses;
- Any proposed mitigation measures where potential adverse impacts are identified, including the less discriminatory alternatives that may be available;
- Proposed changes to this Policy.

When presenting an equity analysis for public comment, the MBTA will make efforts to explain the basis for its findings in a clear and accessible way, understanding the information presented is often complex.

⁷ The MBTA’s Public Engagement Plan can be found at: www.mbta.com/policies/public-engagement

Policy Title	Supersedes	Page Number
MBTA Service and Fare Change Equity Policy	Disparate Impact/Disproportionate Burden (DI/DB) Policy of January 17, 2017	4 of 5

Board Approval

Title VI equity analyses shall be presented to the Board of Directors of the MBTA for their consideration, awareness, and approval prior to the implementation of any proposed fare or major service change.

The Board of Directors provided its consideration, awareness, and approval of this Policy on April 19, 2023 and as amended on October 24, 2023. Future revisions to this Policy shall be presented to the Board in the same manner.

Policy Title	Supersedes	Page Number
MBTA Service and Fare Change Equity Policy	Disparate Impact/Disproportionate Burden (DI/DB) Policy of January 17, 2017	5 of 5