



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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DISPARATE IMPACT AND DISPROPORTIONATE BURDEN POLICY FOR THE BOSTON REGION METROPOLITAN PLANNING ORGANIZATION'S LONG-RANGE TRANSPORTATION PLAN

Federal Requirement

The Federal Transit Administration's (FTA) Title VI Circular 4702.1B, issued October 2012 under the authority of Title VI of the Civil Rights Act of 1964, directs metropolitan planning organizations (MPO) to analyze the impacts of the distribution of state and federal funds in the aggregate and to identify any disparate impacts on the basis of race, color, or national origin (i.e., impacts to minority populations). FTA's Environmental Justice (EJ) Circular 4703.1, issued August 2015, further directs MPOs to identify and address disproportionately high and adverse effects (referred to as disproportionate burdens) of its activities on minority populations and low-income populations. The Federal Highway Administration's (FHWA) *Environmental Justice Reference Guide*, issued in April 2015, contains the same requirements for MPOs related to identifying disparate impacts and disproportionate burdens.

Purpose of the Policy

As a recipient of federal funding from FTA and FHWA, the Boston Region MPO complies with both agencies' Title VI and EJ requirements. The MPO's Disparate Impact and Disproportionate Burden (DI/DB) Policy allows the MPO to identify potential regionwide future disparate impacts on minority populations and disproportionate burdens on both minority populations and low-income populations in the MPO region (collectively referred to as protected populations) that may result from the set of investment decisions in its Long-Range Transportation Plan (LRTP). Disparate impacts and disproportionate burdens are defined by FTA and FHWA as follows:

- **Disparate Impact:** A facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the policy or practice lacks a substantial legitimate justification and where there exists one or more alternative policies or practices that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.
- **Disproportionate Burden:** A neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of a disproportionate burden requires the evaluation of alternatives and mitigation

of burdens where practicable. (Although EJ guidance covers minority populations as well, disproportionate burdens only refer to those impacts to low-income populations as minority populations are covered by the more stringent definition of a disparate impact.)

While neither FTA nor FHWA require MPOs to have a DI/DB policy, the policy allows the MPO to make those determinations in a transparent and consistent manner that clearly conveys the findings to the public.

Scope

This policy applies to the analysis of the projected impacts of the set of major infrastructure projects (MI) that would be funded in the LRTP over the next 20 years, and that would change the capacity of the transportation network. These projects are analyzed for impacts as one group; individual projects are not analyzed for disparate impacts or disproportionate burdens under this policy. The MPO defines MI projects as

- Highway projects
 - Projects that improve facilities that are important to regional travel, which include Interstate Highways; Principal Arterial Freeways and Expressways; or all sections of roadways classified as Principal Arterial “Other” that have fully or partially controlled access, or
 - Projects that cost \$50 million or more; and
- Public transit projects
 - Projects that add new connections to or extend the rail or fixed-guideway transit network or extend the bus rapid transit network, or
 - Projects that cost \$50 million or more

The MPO reserves funds for these projects in the LRTP’s MI Program and also sets aside funding in several other investment programs as described in the LRTP. The actual projects funded through these other programs are identified in the Transportation Improvement Program (TIP). The equity analysis that is completed for the projects funded in the TIP addresses the impacts of these projects.

Comparison Populations

Per FTA and FHWA requirements, the analysis to identify disparate impacts and disproportionate burdens (DI/DB analysis) compares the projected impacts on the entire protected population in the MPO region to the projected impacts on the entire non-protected population in the MPO region. Analyzing and comparing impacts on these populations at the neighborhood and municipal scale is not part of this policy, as impacts of the program of projects are only identified at the regional population level. Thus, the projected impacts on the minority population in the MPO region are compared to those on the nonminority population, and the projected impacts on the low-income

population in the MPO region are compared to those on the non-low-income population. The definitions of these populations are as follows:

- **Minority population:** People who identify as Black or African American, Asian, American Indian or Alaska Native, or Native Hawaiian or other Pacific Islander, and/or Hispanic or Latino/a/x.
- **Nonminority population:** All other people.
- **Low-income population:** People whose family income is 200 percent or less of national poverty level, based on their family size.
- **Non-low-income population:** All other people.¹

Developing the Policy

MPO staff worked with the MPO board, a stakeholder working group, and members of the public over three years to develop the DI/DB Policy. MPO staff convened four meetings of the stakeholder working group to help guide the direction of the policy and provide input throughout the process. The stakeholders represented a variety of interests, including advocacy groups, human service transportation agencies, municipal planners, and MPO board members. Stakeholders provided valuable feedback at critical decision-making points, helped staff prioritize metrics that are analyzed for disparate impacts and disproportionate burdens, and provided suggestions for the direction of the policy, many of which were ultimately included. The work to develop the policy was divided into two phases; two memos were written to summarize that work, which can be found [here](#). At the conclusion of phase one, the MPO approved the use of an interim [draft DI/DB Policy](#) for use in the 2019 LRTP, *Destination 2040*. This final policy replaces the draft policy.

Identifying Disparate Impacts and Disproportionate Burdens

The MPO staff use a travel demand model to analyze the projected impacts of the LRTP program of projects over the 20-year horizon on the regionwide minority, nonminority, low-income, and non-low-income populations. Staff analyze two scenarios projecting to the horizon year of the LRTP to assess these impacts: the no-build scenario (in which the program of projects is not implemented) and the build scenario (in which the program of projects is implemented). The results are assessed as weighted regionwide averages.

¹ Minority status is derived from the 2010 Decennial Census. Poverty status is derived from the 2010–14 American Community Survey.

To identify potential future disparate impacts and disproportionate burdens, the MPO staff analyzes several metrics for both scenarios and compares the results. Using feedback from stakeholders and the public, the MPO selected metrics related to accessibility to opportunities, mobility, and the environment for *Destination 2040*. MPO staff identified each metric's baseline uncertainty for minority, low-income, nonminority, and non-low-income populations. The baseline uncertainty accounts for the inherent uncertainty in the travel demand forecasting process and helps to ensure that outcomes are not incorrectly labeled as potential disparate impacts or disproportionate burdens that are likely due to model uncertainty. The baseline uncertainty is distinct for each population because each populations' size, geographic distribution, and projected travel behavior differ. Due to the evolving nature of the analytical process, the specific metrics used to identify disparate impacts and disproportionate burdens may be updated between LRTPs, as will the accompanying baseline uncertainties.

The process to identify disparate impacts and disproportionate burdens aligns with federal guidance that requires the analysis to determine that

- the impact is *caused* by the MPO's investments,
- the impact is *significant*, and
- the impact *disproportionately affects* the protected population compared to the non-protected population.

To make this determination, every impact must pass a series of three thresholds, in the order listed below. If it does not pass any one of them, the analysis stops and there would be no disparate impact or disproportionate burden.

- **Baseline Uncertainty Threshold: Moderate Uncertainty**
This threshold determines whether the model's predicted impact to each population group is likely to occur or whether it is likely due to the model's uncertainty. The impact to at least one population group in a pair must exceed the baseline uncertainty threshold to move on to the next threshold. For example, for the minority and nonminority population pair, at least one of these population groups must exceed the threshold.
- **Practical Impact Threshold: 0 percent**
This threshold determines whether the impact would be practically significant. (An impact that is practically significant is one that would have a demonstrable effect on people's quality of life. For example, an increase in carbon monoxide emissions that affects health outcomes.) To pass the practical impact threshold, the impact must exceed the threshold for at least one population group in a pair.
- **Disproportionality Threshold: 0 percent**

The disproportionality threshold determines whether the impact would disproportionately and adversely affect the protected population compared to the non-protected population. Disproportionality is calculated as a ratio comparing the absolute value of the percent change for the protected population to the absolute value of the percent change for the non-low-income population. If the ratio falls outside of the disproportionality threshold there would be a disparate impact or disproportionate burden.

Adverse impacts can either be the denial of benefits or the imposition of burdens. For some impacts (such as average travel time) an increase from the no-build to build scenarios will indicate a burden and a decrease will indicate a benefit, while for other impacts the reverse will be true (such as access to jobs).

Addressing Disparate Impacts and Disproportionate Burdens

If the DI/DB analysis for a given program of projects results in a finding of a potential future disparate impact for at least one metric, the MPO staff will determine whether there is a substantial, legitimate justification for implementing the program of projects as proposed, as required by federal regulations, and present the conclusion to the MPO board. Staff will also determine whether there are one or more alternatives to the program of projects that meet the same goals of the original projects but that have fewer disparate impacts. If there are, staff will present the alternatives to the MPO board. Any proposed alternative(s) will be subject to the same DI/DB Policy and analysis.

Similarly, if the DI/DB analysis indicates that there is a potential future disproportionate burden for at least one metric, the MPO staff will recommend to the MPO board steps to take to avoid, minimize, or mitigate these impacts, where practicable.

For both potential disparate impacts and disproportionate burdens, alternatives may include a mixture of strategies to mitigate, minimize, or otherwise avoid these impacts. Because the LRTP is a long-term planning document and the projected impacts are likely to occur 20 years into the future, these strategies will likely involve programming future TIP projects to mitigate the disparate impact(s) and/or disproportionate burden(s). The MPO may also use this policy during the development of future LRTPs, when conducting scenario planning or making decisions about project programming, to avoid disparate impacts and disproportionate burdens prior to project selection.

Public Engagement

Members of the public have had opportunities to provide input throughout the development of this policy. This DI/DB Policy, as well as the metrics that are analyzed for disparate impacts and disproportionate burdens, reflects public input from outreach conducted between 2018 and 2020. During the development of future LRTPs, members of the public will also have the chance to review and comment on the results of the

application of the DI/DB Policy to any scenario planning or other project selection process. The MPO board will also provide a meaningful opportunity for public comment on any proposed alternatives recommended by the MPO staff.