Achieving equity is integral to all of the Boston Region Metropolitan Planning Organization's (MPO) work. One of the ways the MPO works toward achieving equity is to ensure that the group of transportation projects that the MPO funds are not discriminatory toward minority and low-income communities. Between 2018 and 2020, MPO staff undertook an extensive public engagement process to develop a Disparate Impact and Disproportionate Burden (DI/DB) Policy that would achieve that goal. This policy is one of the first of its kind in the country. This is the story of how the MPO developed its DI/DB Policy.

A Short History of the Boston Region MPO
Proposed "Inner Belt" highway (I-695) plan at Inman Square, Cambridge, MA.

The 1950s were an era of highway building, but there was no comprehensive process for transportation planning and little to no community engagement. In the Boston region, plans to build the Inner Belt (proposed Interstate 695, shown above) would have destroyed entire neighborhoods throughout Boston and surrounding municipalities, many of which were lower income or predominantly minority communities. The result was an activist and political backlash against the consensus that building highways was the way of the future. In response to protests, in 1970 Massachusetts put a moratorium on building highways inside the Route 128 beltway.
The creation of MPOs by Congress in 1973 was in part a direct response to the highway revolts in Boston and across the country and was intended to impart a comprehensive, continuing, and cooperative transportation planning process in metropolitan regions. The Boston Region MPO, formally created in 1975, was born from this process. Now, the MPO carries the legacy of the highway revolts and the responsibility to ensure that its transportation planning process is fair, transparent, and accessible, and that the projects it funds do not result in discriminatory impacts.

**Federal Mandates**

Two important federal regulations – the Title VI of the Civil Rights Act of 1964 and the Environmental Justice Executive Order (EJ EO) – laid the policy groundwork for preventing discrimination in transportation planning across the country and ensuring that all people can meaningfully participate in planning the future of their communities.
Administration, from which the MPO receives funding, direct MPOs to comply with Title VI and the EJ EO. One of those requirements is to identify and address impacts of the transportation projects that they fund that would disproportionately affect minority and low-income populations.

**Civil Rights Act**

President Lyndon Johnson signs the Civil Rights Act while many, including Martin Luther King, Jr., look on.

Title VI of the Civil Rights Act of 1964 states that

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

Title VI of the Civil Rights Act prohibits both intentional discrimination and unintentional discrimination. The DI/DB Policy
was developed to prevent unintentional discrimination. Disproportionate impacts on minority populations that result from unintentionally discriminatory practices and policies are called **disparate impacts**.

**Environmental Justice Executive Order**

The EJ EO, which was signed by President Clinton in 1994, states that

> “Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

**Disproportionate burdens** are considered to be significant adverse effects of transportation policies and practices that disproportionately affect low-income populations.

While **disparate impacts** and **disproportionate burdens** stem from different federal mandates, in practice they effectively mean the same thing: impacts that disproportionately affect either the minority or low-income population compared to the nonminority or non-low-income population, respectively. In the context of the DI/DB Policy, the main difference is how the MPO must address any identified disparate impacts or disproportionate burdens (see below).

**Demographics of the MPO Region**

About twenty-eight percent of residents in the region identify as minority (non-white and/or Hispanic or Latino/a/x). Additionally, about one-third of residents live in a family whose income is
equal to or less than two-hundred percent of the poverty level, and so are considered to be low-income.

This map shows the percent of the population in the region that identifies as minority (Black or African American, Asian, Hawaiian Native or Pacific Islander, American Indian or Alaskan Native, and/or Hispanic). The darker purple areas indicate a higher percentage of people who identify as minority.

This map shows the percent of the population in the region that has low-income. This means their family income is less than or equal to 200 percent of the national poverty level for the family
Preventing Discrimination with a DI/DB Policy

In 2017, the MPO began a process to develop a DI/DB Policy that would allow the MPO to identify disparate impacts and disproportionate burdens that are likely to result from projects funded in the MPO’s Long-Range Transportation Plan (LRTP). The policy would be used to evaluate the impacts of the projects, as a group, on the minority and low-income populations living in the Boston region. Impacts on minority populations are compared to those on nonminority populations. Similarly, impacts on low-income populations are compared to those on non-low-income populations. The DI/DB Policy determines whether the difference in impacts between each of the two population groups might be the result of unintentional discrimination.

How does the DI/DB Policy prevent discrimination?

The DI/DB Policy formalizes the MPO’s efforts to prevent discrimination that may result from project impacts before the projects are built. Because MPO staff assess likely project impacts
to minority and low-income populations during the development of the LRTP, the MPO board members can proactively ensure that they select projects that do not adversely affect low-income and minority populations relative to non-low-income and minority populations, respectively.

What is in a DI/DB Policy?

Although there is no mandatory methodology for identifying disparate impacts, some transportation agencies use an approach developed in the context of employment discrimination, one of the earliest applications of disparate impact regulations. This methodology generally regards a hiring rate for the protected population group that is less than eighty percent of the rate for the non-protected population group as evidence of a disproportionate adverse impact.

However, simply using this “eighty percent” rule, as it is often called, does not reflect the lived experiences of people who use the transportation system or the complex nature of transportation planning analyses. Ultimately, the MPO wanted a policy that reflected the need for minority and low-income populations to be protected from unintentional discrimination and would be useful as a proactive planning tool to prevent such discrimination.
MPO staff turned to the processes established by the US Department of Justice to identify disparate impacts and by the US Department of Transportation for identifying disproportionate burdens. Because the agencies' criteria for determining impacts and burdens are similar in nature, they both can be summarized in the three steps below:

1. The impact must be caused by the projects, as a group, that the MPO proposes to fund.
2. The impact must significantly affect peoples' quality of life.
3. The minority or low-income population must be more adversely affected compared to the non-minority or non-low-income population, respectively.

MPO staff strove to develop a DI/DB Policy that would consist of three thresholds, one for each step. A disparate impact or disproportionate burden would be indicated if all three thresholds, shown below, were passed:

1. The **baseline uncertainty threshold** determines whether the impact would likely be caused by the transportation projects, as a group.
2. The **practical impact threshold** determines whether the impact would be significant enough to affect peoples' quality of life.
3. The **disproportionality threshold** determines whether the impact would disproportionately affect the minority or low-income population more than the nonminority or non-low-income population, respectively.
Which impacts are analyzed?

Impacts that the MPO analyzes for disparate impacts and disproportionate burdens include the following:

- access to destinations, such as universities and colleges, healthcare facilities, jobs, and other essential places
- travel times
- traffic congestion
- pollution

Which projects are analyzed?

The DI/DB Policy is used to analyze the LRTP projects that change the capacity of the transportation network (for example, adding or removing a lane on a road or building a new subway line) and that use state or federal funding. The map below shows the locations of projects that were analyzed in the 2019 LRTP, Destination 2040.
Projects included in the MPO’s 2019 LRTP, *Destination 2040*. For more details, see Chapter 4, The Recommended Plan.

**The DI/DB Development Process Begins**

**Why is public input important?**

MPO staff convened a stakeholder working group with the primary purpose of guiding the MPO’s decision on setting the values of the three thresholds. Creating a DI/DB Policy through a transparent public process, with the involvement of both stakeholders who work with and represent the interests of minority or low-income populations and the MPO board, built trust that the policy will be an effective tool for preventing unintentional discrimination. In addition, stakeholders brought with them an intimate understanding of the lived experiences of people in minority and low-income communities and the inequities they face.

The DI/DB stakeholder working group included representatives of the following organizations:

- Conservation Law Foundation
- Greater Four Corners Action Coalition
- Hessco Elder Services
- Massachusetts Department of Transportation
- Mattapan Food and Fitness Coalition
- Regional Transportation Advisory Council (whose chair is a MPO board member)
How did public input shape the DI/DB Policy?

MPO staff collaborated with stakeholders to help staff

- identify which transportation impacts are the most important to address with the DI/DB Policy, and
- craft the policy to ensure it strongly reflects the interests of low-income and minority populations.

Throughout several meetings (see the timeline below), stakeholders discussed the role of the DI/DB Policy in advancing equity in the Boston region, how the DI/DB Policy could be designed to prevent discrimination, and impacts that the MPO should analyze for potential disparate impacts and disproportionate burdens. At the third meeting, in July of 2018, staff asked stakeholders to provide recommendations for the policy’s three thresholds. One of the key recommendations was that MPO staff should further study when an impact, such as a change in carbon monoxide emissions, affects quality of life (threshold two). MPO staff spent the subsequent two years addressing this and other recommendations, which included several tasks:

- updating metrics analyzed with the DI/DB Policy (ongoing)
- developing a methodology to identify the uncertainty associated with each metric (spring 2019)
- developing an interim draft DI/DB Policy that was used in the 2019 LRTP (May 2019)
- documenting the work completed to date develop the DI/DB policy in Development of the DI/DB Policy for the LRTP: Phase One memo (November 2019)
• completing the Disparate Impact Metrics Study, which addressed the recommendation for threshold two (November 2020)

![Timeline Image]

**The Final DI/DB Policy**

In 2020, MPO staff developed a proposal for a final DI/DB Policy. It states that an impact must pass a series of three thresholds, in the order listed below, to be considered a disparate impact or disproportionate burden. If it does not pass any one of them, the analysis stops at that step and it would be determined that there would be no disparate impact or disproportionate burden. The thresholds are as follows:

1. Baseline Uncertainty Threshold = moderate uncertainty
2. Practical Impact Threshold = zero percent
3. Disproportionality Threshold = zero percent

The policy reflects another important recommendation from stakeholders, which is that any impact that adversely affects either the low-income or minority population more than the non-low-income or nonminority population, respectively, would be considered a disparate impact or disproportionate burden. This recommendation was incorporated into the final policy in that the third threshold was set to zero percent.

In August 2020, MPO staff brought this proposal back to the stakeholders for their discussion and recommendations. In
general, stakeholders were supportive of the proposed policy. Some suggested that the MPO utilize a negative value for the disproportionality threshold in order to redress historical inequities in the transportation system. The DI/DB Policy is intended to meet a federal requirement to prevent unintentional discrimination. It is not intended to address the inequities in the current system. However, the MPO and MPO staff continue to explore and implement strategies to support

- expanded engagement with populations underserved and underrepresented in transportation planning, including minority and low-income populations, in order to better understand the transportation challenges and inequities they face, and
- enhanced analyses that reflect the transportation needs of these populations and address concerns raised by stakeholders concerning existing inequities.

The MPO board approved the use of the proposed DI/DB Policy on November 5, 2020.

**Lessons Learned and Next Steps**

Collaborating with stakeholders was a critical component for the development of the MPO’s DI/DB Policy. Stakeholders brought important, diverse perspectives to the table that strengthened the policy and helped build trust that it would be effective at preventing discrimination. MPO staff were transparent with stakeholders about the challenges that they faced in developing the policy. So, while there was not agreement in every discussion, there was mutual respect. Throughout the process, MPO staff
shared progress of the stakeholder meetings with the MPO board. This, along with having several MPO board members participate in the stakeholder meetings, ensured that the board understood and embraced the policy.

The DI/DB Policy will be used to evaluate the proposed projects during the development of the next LRTP, which will be completed in 2023, and all subsequent LRTPs. If a disparate impact is found, the MPO can only move forward with the proposed projects if there is no alternative that is less discriminatory and if the MPO provides a substantial, legitimate justification for implementing the proposed projects. If a disproportionate burden is found, the MPO must take steps to avoid, minimize, and mitigate the impact, where practicable. More information about the MPO’s approach to addressing disparate impacts and disproportionate burdens can be found here.

Questions or comments?
Contact Betsy Harvey, Transportation Equity Program Manager at eharvey@ctps.org or 857.702.3701.

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</tr>
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</tr>
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