



## THE PURPOSE OF THE LONG-RANGE TRANSPORTATION PLAN

*Paths to a Sustainable Region*, the Long-Range Transportation Plan of the Boston Region Metropolitan Planning Organization (referred to as the LRTP), is the long-range, comprehensive transportation planning document for the Boston region. The region encompasses 101 cities and towns from Ipswich to Duxbury and Boston to Marlborough (see Figure 1-1). This is the area in which transportation planning is the responsibility of the Boston Region Metropolitan Planning Organization (MPO), as will be explained in this chapter. Covering 1,405 square miles, the MPO region makes up about 18 percent of the state’s land area; however, with more than three million residents, it has 48 percent of the state’s population.

The LRTP defines transportation visions for the future of the region, establishes goals and policies that will lead to the achievement of the visions, and allocates projected revenue to transportation programs and projects that implement those goals and policies. Fundamentally, the LRTP is about making choices for the future of the metropolitan area—choices about local and regional land use, choices about where to allocate limited transportation resources, and choices about the type of future we wish to see for our region and, by extension, the commonwealth of Massachusetts. In accordance with applicable federal planning regulations, the LRTP addresses surface transportation issues only.

The LRTP’s 23-year scope (2012 to 2035) allows the MPO to consider the transportation network’s future from a broad perspective. Only projects funded with federal dollars designated as “regionally significant” and “major investment” projects are specifically listed by name in the LRTP. The term “regionally significant” refers to projects required by federal regulations to be included in the travel demand model (a computer model) for air quality conformity purposes—generally, any project that adds capacity to the regional transportation network. Major investment projects are projects that cost over \$10 million.

FIGURE 1-1

THE BOSTON REGION MPO'S MUNICIPALITIES



For a more detailed explanation of the types of projects that must be included in the model, see Chapter 10, Air Quality Conformity Determination. Many of the transportation projects and programs that will be funded with federal dollars in the next 23 years do not add capacity to the transportation system and are, therefore, not specifically identified in the LRTP. The function of these projects will be primarily to maintain and operate the existing system. Nevertheless, when it comes time to select projects for funding in the Transportation Improvement Program, selection will be based upon how well they implement the goals and policies adopted in the LRTP.

## THE BOSTON REGION MPO STRUCTURE

The Boston Region MPO is responsible for the development of the LRTP. It conducts transportation planning in its region for a variety of transportation modes and facilities, including highway, transit, nonmotorized, and freight. By bringing together representatives from local, regional, state, and federal entities and a public advisory council, and engaging with members of the public, MPO decision making is sensitive to the diverse range of interests and concerns that exist in the Boston region.

Federal law establishes requirements and guidelines for transportation planning in urbanized areas with populations of more than 200,000. In order to be eligible for federal transportation funding, an area must maintain a continuing, cooperative, and comprehensive (3C) transportation planning process. The Boston Region MPO is responsible for carrying out the 3C process in its area.

The MPO is a cooperative board of 14 voting members:<sup>1</sup>

- Massachusetts Department of Transportation (MassDOT) – three members, including the MassDOT Highway Division
- Massachusetts Bay Transportation Authority (MBTA)
- Massachusetts Bay Transportation Authority Advisory Board
- Massachusetts Port Authority (Massport)
- Metropolitan Area Planning Council (MAPC)
- City of Boston
- Six elected municipalities (three cities and three towns) from the Boston region, currently:
  - o City of Somerville
  - o City of Newton
  - o Town of Braintree (city form of government)
  - o Town of Bedford
  - o Town of Framingham
  - o Town of Hopkinton

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<sup>1</sup> The Boston Region MPO has revised its Memorandum of Understanding (MOU) and organizational structure. It will become effective November 1, 2011. The new structure can be reviewed at [www.bostonmpo.org](http://www.bostonmpo.org) in the fall of 2011.

The Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Regional Transportation Advisory Council (the Advisory Council), which is the MPO's official advisory group, also participate on the MPO, in a nonvoting capacity.

## THE RELATIONSHIP TO OTHER PLANNING DOCUMENTS

In addition to the LRTP, the Boston Region MPO is required to develop other documents and programs as part of the 3C transportation planning process. These include:

- The Unified Planning Work Program (UPWP)
- The Congestion Management Process (CMP)
- The Transportation Improvement Program (TIP)



The UPWP and the CMP are used in the development of the LRTP. Along with the TIP, they help to implement the visions and objectives of the LRTP. Other documents or initiatives considered in the development of the LRTP are:

- The MBTA Program for Mass Transportation (PMT)
- Legal commitments of the Commonwealth of Massachusetts

Brief descriptions of all of the above and their relationship to the LRTP are provided below.

### The Unified Planning Work Program

The annual Unified Planning Work Program (UPWP) describes transportation planning studies to be undertaken by the MPO and other entities in the Boston region during a given federal fiscal year. The UPWP is intended to serve two purposes. The first is to provide information to federal and state government officials, municipalities, regional organizations and interest groups, and the general public about all of the transportation planning studies that are expected to be undertaken in the region. The second is to provide complete budget information to federal and state officials about the expenditure of federal funds for planning studies that will be carried out by the MPO.

The planning studies in the UPWP are an important source of ideas and information that may help in project selection for the LRTP and TIP and also may evolve into projects that will eventually be included in the LRTP, and ideas received during the public outreach process for the LRTP sometimes lead to studies included in the UPWP.

## The Congestion Management Process

The MPO's Congestion Management Process (CMP) is an ongoing program for monitoring mobility in the region, providing the MPO and transportation planners with timely information about transportation system performance, and making recommendations in the areas where mobility deficiencies are found. The CMP program includes the systematic measurement and analysis of mobility problems in the region. The MPO staff then provides decision makers with information about transportation system performance and with strategies and recommendations for addressing identified problems and improving mobility. Information from the CMP and associated planning studies funded through the UPWP are used in the selection of projects for the LRTP and the TIP.

## The Transportation Improvement Program

The Transportation Improvement Program (TIP) is a multimodal program that sets forth a detailed list of transportation projects that are programmed to receive federal funding during the four-year horizon of the document. The projects advanced in the TIP are consistent with the policies and goals of the LRTP. The TIP describes the transportation projects that are expected to be implemented during this four-year period and provides information about how they have been prioritized. It also includes a financial plan showing the revenue source or sources, current or proposed, for each project. In order to be eligible to receive federal funds, a project must be programmed in the current federal fiscal year's TIP. In addition to the federally funded projects, most highway projects funded with state transportation money are also included in the TIP in the Boston region. In order for any regionally significant project to be included in the TIP, it must be included in the LRTP. One function of the TIP is to serve as the implementation arm for the LRTP.

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## The MBTA Program for Mass Transportation

The MBTA Program for Mass Transportation (PMT) is the long-range, fiscally unconstrained, 25-year capital program of the MBTA. The objective of the PMT is to identify and prioritize projects that will result in a cost-effective mass transit system that serves the greatest number of passengers while furthering environmental, economic development, and environmental justice goals. The MBTA adopted the current PMT in December 2009. The MPO uses it to prioritize transit projects for inclusion in the LRTP.

## Legal Commitments

Several transportation projects are legal commitments that MassDOT or other transportation agencies in Massachusetts must complete within a certain time frame. The legal commitments that have the greatest impact on planning in the Boston region are those pertaining to the State Implementation Plan (SIP) and the Central Artery/Tunnel project.

The federal Clean Air Act requires states with one or more MPO regions that do not meet federal air quality standards, such as Massachusetts, to produce a SIP. A SIP describes the efforts that a state has made, or proposes to make, to reduce levels of pollutants, such as ozone and carbon monoxide. Massachusetts was required to produce a SIP, and MassDOT and other transportation agencies, including the MBTA and



Massport, are required to implement the transportation projects and policies that are included in the SIP.

In the SIP, the Central Artery/Tunnel (CA/T) project commitments are the result of an agreement entered into by the state's Department of Environmental Protection (DEP) and the former Executive Office of Transportation (EOT, now MassDOT) during the approval process for the CA/T project. This agreement was updated, with revised implementation schedules, in an Administrative Consent Order between DEP and EOT in 2000. In 2004, EOT and DEP began a process, completed in July 2008, of reevaluating the projects in the original SIP commitments. This process was undertaken to ensure that any further investments fund the best regionally significant projects that meet air quality goals and requirements.

As a matter of policy, the MPO includes all legal commitments related to the SIP and the Consent Order in the LRTP.

## THE LRTP DEVELOPMENT PROCESS

Federal metropolitan planning regulations require MPOs to develop a regional transportation plan every four years. This section outlines the process that was followed in the development of the new LRTP, *Paths to a Sustainable Region*.

### Public Outreach for the LRTP

#### *Process and Activities*

The MPO's Public Participation Program is designed to provide opportunities for members of the public, interest groups, other stakeholders, and elected officials to be involved in MPO decision making, including the development of the LRTP, the UPWP, and TIP; the program also supports the ongoing work of the Regional Transportation Advisory Council (the Advisory Council) and the MPO's Transportation Equity Program. The MPO adopted its current Public Participation Program in June 2007 and amended it in April 2010. The activities identified in the program are designed to meet federal planning rules that require the MPO to maintain a continuing, cooperative, and comprehensive (3C) transportation planning process and also reflect the MPO's commitment to providing opportunities for substantive public involvement. The MPO followed and expanded on the Public Participation Program as it developed a specific Public Involvement Plan for *Paths to a Sustainable Region*, which was approved by the MPO in February 2010.

In developing *Paths to a Sustainable Region*, the MPO conducted a variety of outreach



activities, beginning in the spring of 2010, inviting the involvement of participants that included the Regional Transportation Advisory Council; area residents; municipal, state, and federal officials; businesses; transportation interest groups; environmental groups; transportation providers; persons with disabilities; low-income and minority communities; the elderly; and persons with limited English proficiency. Methods for eliciting public input included the following:

- **The Advisory Council**, the main avenue for public involvement for the MPO. It serves the MPO as its official advisory group. Composed of transportation advocacy and other interest groups, municipal officials, and state agencies, it is charged with creating a forum for the ongoing and robust discussion of pertinent regional transportation topics and for generating diverse views to be considered by the MPO. MPO staff often discussed *Paths to a Sustainable Region* with the Advisory Council and its LRTP subcommittee during the course of the LRTP development. The Advisory Council submitted several letters and reports to the MPO, expressing its views and providing guidance to the MPO.
- **Open houses** that informed the public about the transportation planning process and about studies and projects underway, and that offered a forum for discussion and an exchange of ideas. Open houses were held periodically from the adoption of the last LRTP in 2009 through the summer of 2011, and focused on LRTP topics such as policies, modeling, transportation equity, transportation projects, and land use planning.
- **Public workshops** held in July 2010, February 2011, and August/September 2011 to hear the views of members of the public, and to provide information on the LRTP and TIP. The February 2011 workshops were held to generate feedback on the draft transportation needs assessment, and the August/September 2011 workshops were held to discuss the draft LRTP and seek more comments.
- **A Transportation Equity Forum** held in February 2011 at the Boston Public Library for professionals working in organizations serving environmental justice neighborhoods and for members of the public, to discuss the transportation needs of low-income and minority persons living in these neighborhoods.
- **“Invite Us Over” sessions**, where MPO staff visited, when requested, organizations with an interest in transportation planning, to present information and discuss ideas for the LRTP.
- **MAPC subregion meetings**, where MPO staff met periodically with MAPC subregional groups to keep these local officials informed of the LRTP process and progress and to gather feedback on the visions and policies, the transportation needs assessment, and information on projects under consideration for inclusion in the LRTP.



- Environmental Consultation, held in July 2011, where staff discussed the environmental facets of long-range transportation issues and solutions with state agencies responsible for environmental matters.

## Communicating with the Public

The MPO uses several means to keep members of the public informed about MPO news, activities, and events, and to encourage public participation in the transportation planning process.

### Email Distribution Lists: MPOinfo and MPOmedia

As an ongoing part of the planning process, the MPO prepares press releases, flyers, and other notices for distribution to a broad network of interested parties. These materials are distributed via the MPO's one-way email list, MPOinfo, which includes more than 1,700 contacts, including municipal officials, planners, transportation equity contacts, special interest groups, members of the general public, legislators, environmental agencies and interest groups, and freight and transportation providers. Press releases and informational flyers are also distributed to more than 200 media outlets, including local Spanish-language publications (which receive Spanish-language text). Outreach materials are also distributed to the Access Advisory Committee to the MBTA (AACT), which works with the MBTA to ensure that the public transportation system in the region is accessible to the elderly and people with disabilities.

The MPO has expanded its email contacts so that its messages reach councils on aging; commissions on disability; community development corporations; chambers of commerce; economic development, Main Street districts, and transportation committees; and conservation, youth, historical, and natural resource commissions.

## TRANSREPORT

The MPO's monthly newsletter, TRANSREPORT, is an important means of providing information on various aspects of the entire MPO planning process, including announcements of public participation opportunities and outreach activities. Each issue provides information on upcoming transportation-related public meetings and events, MPO studies completed or underway, other MPO activities, and ways to contact MPO staff with ideas and questions. Special inserts on important LRTP topics are included to provide detailed information and encourage public comment.

TRANSREPORT is sent to approximately 3,000 recipients, including over 100 state legislators and their staffs, numerous local officials, and members of the general public in each municipality in the region.

TRANSREPORT issues are posted each month on the MPO's website, which also has an archive of past issues.





## Website

The MPO's website has pages designated for the LRTP and each of the other certification documents. These pages are updated frequently. Basic information on *Paths to a Sustainable Region* has been posted at [www.bostonmpo.org/2035plan](http://www.bostonmpo.org/2035plan) since the planning process for the current LRTP was launched. Draft documents were posted as they became available, at [www.bostonmpo.org/2035input](http://www.bostonmpo.org/2035input). These Web pages were promoted through the website's home page, by email messages to MPOinfo, and on postcards that were distributed at public meetings.

A new Web feature developed for *Paths to a Sustainable Region* allows visitors to easily submit feedback. Under each draft document, a "Provide Feedback" button was posted. By clicking on this button, a visitor to the website could provide feedback on any draft material at any time. The feedback was organized by topic and presented to the MPO.

## Social Media

The MPO launched a Twitter account (@BostonRegionMPO) in March 2010. Social media sites are among the most visited websites on the Internet and allow the MPO to reach a broad audience and attract people to the MPO's website to learn more about the MPO's work. Announcements about *Paths to a Sustainable Region*, such as the availability of draft documents and public meeting information, are transmitted through Twitter. The MPO also uses YouTube to explain transportation planning issues and will produce a video summary of the LRTP. The use of social media is also consistent with the MPO's Public Participation Program, which calls for utilizing new avenues of communication.

## Public Comments

As a result of the outreach, the MPO received numerous comments on the LRTP from municipalities, regional entities, interest groups, and members of the public. The MPO reviewed and considered all comments during the decision-making process. A summary of written and oral comments relating to the development of the LRTP is included in Appendix A. In addition, the MPO responded to comments received during the formal comment period for the draft LRTP (August/September 2011). The comments received during the formal comment period, along with the MPO actions taken, are also included in Appendix A, in a separate table.



## Environmental Justice

Environmental justice was an important factor in the development of *Paths to a Sustainable Region*. MPO policies promote the equitable sharing of the benefits and burdens of the region's transportation system, as well as participation in decision making. In addition to the public outreach program described above, the MPO also has a transportation equity program to identify transportation needs of minority and low-income populations and to provide information about the planning process in order to encourage public involvement.

The MPO's transportation equity program is composed of three key elements: outreach, analysis, and the MPO's evaluation of environmental justice issues (see Chapter 6, Transportation Equity, for more information). After one-on-one meetings, surveys, and interviews, the MPO provides feedback to community organizations by classifying their needs and concerns as they relate to the LRTP, TIP, UPWP, transit service planning, or another agency. The information is then directed to the agency or entity that can best address each need.

In selecting projects for the LRTP, the potential impact of a proposed project on environmental justice areas is a criterion in the project ranking processes, as discussed in the section, Use of the MPO's Visions and Policies in the Selection of Projects, below. The MPO staff gives positive ratings to projects that are estimated to benefit environmental justice areas.

As part of the LRTP process, the MPO performed a systemwide environmental justice analysis on the set of projects that are currently funded by the MPO (for 2035 conditions if no new projects were funded and constructed) and the set of projects recommended in this LRTP (2035 build conditions). The analysis focuses on the mobility, accessibility, and emissions for communities with a high proportion of low-income or minority residents (see Chapter 9, Environmental Justice Assessment, for more information).



## Consultations on Environmental Issues

The MPO has responded to the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) directives by consulting with agencies responsible for land management, natural resources, historic preservation, and environmental protection and conservation, as related to transportation initiatives. SAFETEA-LU is the federal government's legislation for reauthorization of funding for the nation's surface transportation program. Natural, environmental, and historic resources were mapped for the Boston region using information from the Commonwealth's Office of Geographic and Environmental Information Systems (MassGIS). The information included Areas of Critical Environmental Concern,

flood hazard areas, wetlands, water supply and wellhead protection areas, protected open space, and Natural Heritage and Endangered Species Priority Habitats, and was used in evaluating the projects. This was done by corridor in the needs assessment by overlaying the projects on the maps to determine where environmental issues could potentially arise.

The MPO staff consulted with MassDOT's and the MBTA's environmental divisions to determine their processes for environmental review of project designs. The Massachusetts Environmental Policy Act (MEPA) unit of the Executive Office of Energy and Environmental Affairs was also consulted. The MEPA unit oversees the Massachusetts Environmental Policy Act, which requires project proponents to study the environmental consequences of their actions and to take all feasible measures to avoid, minimize, and mitigate damage to the environment. In addition, the MPO held an environmental consultation meeting in July 2011 to discuss the environmental facets of long-range transportation issues in the region. The Executive Office of Energy and Environmental Affairs and the Department of Environmental Protection attended the meeting along with MassDOT.

Through this consultation, it was determined that the MPO was taking into consideration the appropriate areas of environmental concern. In the Boston region, environmental reviews for projects are conducted by the proponent transportation agency or municipality, not the MPO. The environmental reviews occur when each of the projects is in the design phase and prior to being funded for construction. However, the MPO is willing to consider performing further review and consultation on environmental issues, effects, and mitigation as part of the ongoing 3C process.

## **Development of MPO Visions and Policies**

The first step in developing the LRTP was articulating the MPO's visions for the future of the region and spelling out the policies for achieving that end state. This work was completed in the spring of 2010, with the MPO adopting the LRTP's visions and policies. These are used to guide MPO work and, in particular, as the basis for evaluation criteria and decision making for the LRTP, UPWP, and TIP.

A complete list of the visions and policies guiding the development of the LRTP is provided in Chapter 2, The MPO's Visions and Policies.

## **Selection of Projects**

One of the primary components of this LRTP is a list of major capital expansion projects for implementation over the next 23 years. To select these projects, the MPO first performed a needs assessment for the region to help in determining priorities for the region. This allowed the MPO to prioritize projects from a Universe of Projects and Programs, which is a list of all possible projects for consideration.

## **Needs Assessment for the Region**

The Regional Needs Assessment (included as Volume II of this document) was an initial step in the development of the LRTP. The needs assessment gathered, organized, and analyzed information about the state of the region's transportation system. The needs assessment is a critical component of the LRTP because the region's transportation needs must be inventoried before decisions are made on how problems should be addressed within the constraints of anticipated future funding.

The existing conditions of the various components of the transportation system, their current use, and their projected use in the future are all described in the needs assessment. In addition to issues related to the effective functioning of the transportation system, this needs assessment includes issues related to how the transportation system interacts with the region's current and projected land use conditions, the environment, and low-income and minority populations. The needs assessment was developed at a corridor level using six radial corridors, two circumferential corridors, and a central area. This helped to make the transportation needs of a complex region easier to comprehend.

The needs were prioritized for each of these corridors by five of the MPO's visions – system preservation, mobility, safety, the environment, and transportation equity. It was estimated that the needs of all of the corridors will exceed the financial resources that can be anticipated between now and 2035. Therefore, the region's needs, which were prioritized to guide investment decisions, are summarized in Chapter 3, The Region's Corridors, of this document (Volume I), and in Chapter 10, Regionwide Needs Assessment of Volume II, The Regional Needs Assessment.



### ***Universe of Highway Projects and Programs***

The highway Universe of Projects and Programs is composed of projects that were included in a previously adopted Long-Range Transportation Plan; projects identified through the MPO's Congestion Management Process; projects previously studied or currently being studied; projects included in comments received during the public outreach process for the 2000–25 and 2004–25 LRTPs and JOURNEY TO 2030; projects over \$10 million that are in the current TIP; and projects over \$10 million included in the FFYs 2011–14 TIP Universe of Projects. The

highway Universe of Projects and Programs (Appendix B) lists projects by the corridors identified in the Needs Assessment, along with information on each project's status:

- Identified through a corridor study
- Currently in MassDOT's environmental review or design process
- Included in the JOURNEY TO 2030 LRTP (as a recommended or illustrative project)
- Included in the current TIP
- Identified through public comment
- Meets a need identified in the Needs Assessment

### ***Universe of Transit Projects and Programs***

The MBTA adopted its current Program for Mass Transportation (PMT) in December 2009. The PMT defines a long-range vision for regional mass transportation with



respect to infrastructure improvements. The planning approach taken in this PMT reflects the MBTA's priority of maintaining the existing system with MassDOT and the Commonwealth playing a major role in prioritizing and paying for transit expansions. Past versions of the PMT have placed emphasis on identification and evaluation of potential expansion projects. The current PMT continues to include transit expansion and capacity improvements as important elements for achieving its long-range vision.

The transit Universe of Projects and Programs was derived from this PMT as well as from the MBTA Capital Investment Program (CIP), the MBTA's five-year fiscally constrained plan for investing in the transit system, which currently includes only maintenance projects. The transit Universe of Projects and Programs (Appendix B) lists projects by the corridors identified in the Needs Assessment, along with information on each project's status:

- Included in the current PMT
- Included in the current CIP
- Transit projects recommended as part of the MPO's Congestion Management Process
- Included in the JOURNEY TO 2030 LRTP (as a recommended or illustrative project)
- Identified through public comment
- Meets a need identified in the Needs Assessment

### ***Investment Categories***

The Universe of Projects and Programs was then organized by investment categories to better understand the degree to which different project types advance the MPO's visions and policies. Staff conducted an evaluation to determine whether a project's primary or secondary purposes supported the various MPO policies. The investment categories are:

- State of Good Repair and Maintenance – transit and roadway
- Multimodal Traffic Management and Modernization – transit and roadway
- Management and Operations – transit and roadway
- Expansion – transit, roadway, freight, and shared-use paths (which include MassDOT Bay State Greenway 100 paths)
- Clean Air and Mobility





### ***The Use of the MPO's Visions and Policies in the Selection of Projects***

The MPO used its visions and policies, in the project selection process of the LRTP, as the basis for the project evaluation criteria and for the organization of the MPO's investment categories discussed above.

For those highway and transit projects included in the Universe of Projects and Programs that met a need identified in the Needs Assessment, a very preliminary evaluation was done to determine which of the MPO's vision topics it addressed. This information is included in Appendix B.

The next step was to evaluate how well the projects and programs advanced the MPO's policies within each vision as well as within the investment categories listed above. All projects that were included in the JOURNEY TO 2030 LRTP, were evaluated, and projects and programs that are not included in the JOURNEY TO 2030 that staff felt would advance the visions of the region were all evaluated in order to show how well their primary and secondary purposes advance the MPO's visions and policies. This information was prepared to help the MPO select a strategy that will help to achieve its visions while adhering to its policies. This information is provided at [www.bostonmpo.org/2035plan](http://www.bostonmpo.org/2035plan).

### ***The Availability of Funding for Projects in the LRTP***

MassDOT provided estimates of highway funding for the Boston Region's LRTP in five-year time bands from 2011 through 2035. The estimates include the following funding categories:

- Major Infrastructure Projects
- Regional Discretionary Funding
- Federal-Aid Bridge Projects
- National Highway System/Interstate Maintenance Projects
- Statewide Maintenance

The first two categories – Major Infrastructure Projects and Regional Discretionary Funding – are the categories in which the MPO was given responsibility for project selection. The MPO used this information in developing its financially constrained LRTP.

In addition to the consideration of the various funding categories, the MPO also discussed the amount of allocation of funding to listed projects (projects that either added capacity to the system or that cost over \$10 million) in relation to the amount of funding left unassigned for projects and programs that would maintain or modernize the transportation system.

The MPO agreed with the assumptions in the PMT that all transit funding would go to the MBTA's priority of maintaining the existing system, with MassDOT and the Commonwealth prioritizing and paying for transit expansions. If the MPO were to fund additional transit projects not funded through the Commonwealth, they would do so by using highway funding flexed to transit projects.

## The Development of Investment Strategies for the LRTP

MPO staff prepared three investment strategies, described below, which were designed to provide options highlighting various examples of funding possibilities for consideration. In the development of this LRTP, the MPO is facing serious funding shortfalls and severe maintenance and state-of-good-repair needs. These strategies offered the MPO several choices for working within these constraints, while still maintaining the existing system, improving mobility in all modes, achieving greenhouse gas reductions, and moving toward the other forward-looking visions and policies the MPO embraces.

- Strategy 1 – Current Approach: This strategy proposed that current programming trends continue and that the projects listed in JOURNEY TO 2030 would continue to be funded with highway discretionary and major infrastructure funding in *Paths to a Sustainable Region*.
- Strategy 2 – Current LRTP with a Regional Needs-Based Focus: This strategy proposed highlighting from the JOURNEY TO 2030 the large-scale regional solutions to identified regional needs. It focused mainly on large-scale highway projects from the JOURNEY TO 2030 that address the greatest regional needs.
- Strategy 3 – New Mix of Projects and Programs – Lower Cost/More Flexibility: This strategy was developed to pull into the LRTP a more diverse set of projects and a more varied set of programs, based on identified needs. It was guided by the premise that in times of fiscal constraint, focusing on lower-cost projects would provide the flexibility to address mobility and other needs in many geographic areas of the MPO region, rather than focusing investments in only a few areas.

The MPO focused their discussions around these strategies and the investment categories discussed above. A detailed discussion on the final recommended set of projects is included in Chapter 8, The Recommended Plan.

## Development of Demographic Projections

As part of the LRTP process, land use projections for the year 2035 were used to forecast travel demand. MAPC developed the demographic forecasts using MetroFuture, its long-range plan for land use, housing, economic development, and environmental preservation in the Boston region. It includes both a vision for the region's future and a set of strategies for achieving that future. The MPO adopted the MetroFuture projections for the 101 municipalities in the Boston Region MPO in April 2008. At the same time, the MPO agreed to use the forecasts from the neighboring regional planning agencies for the 63 municipalities that are in the modeled area but that are outside of the Boston Region MPO area. This land use is referred to as the Regional Planning Agency (RPA) Hybrid Scenario, which is used as an input into the MPO's travel demand model, discussed below.

## Travel Demand Forecasts

In developing *Paths to a Sustainable Region*, the MPO conceptualized the region's transportation needs over the next 23 years. Land use patterns, growth in employment and population, and trends in travel patterns differ in how they affect demands on the region's transportation system. In order to estimate future demands on the system for

this LRTP, the MPO utilized a regional travel-demand forecast model. The model is a planning tool used to evaluate the impacts of transportation alternatives given varying assumptions with regard to population, employment, land use, and traveler behavior. The model is used to assess potential projects in terms of air quality benefits, travel-time savings, and congestion reduction.

### **Illustrative Projects**

Illustrative projects are defined as projects that could significantly contribute toward the MPO visions, but which are not included in the recommended list of projects because there is not sufficient revenue to fund them. During the development of this document, the MPO decided not to include illustrative projects in the LRTP. Since there is a significant backlog of maintenance and state-of-good repair work to be done on the highway and transit system, the MPO did not want to highlight specific unprogrammed infrastructure projects that it would select if additional funding were to become available. As described above, under the Universe of Highway and Transit Projects and Programs, projects that were included as illustrative projects in the last LRTP – JOURNEY TO 2030, are shown in Appendix B.

### **Looking Forward**

The MPO views the LRTP as a living document. Implementing this plan will be an integral part of the ongoing planning process. The needs assessment will be updated in an ongoing manner, as new information and analysis are available. Performance measures for the region will be developed and applied. Input from public involvement will be added to information surfacing from these two initiatives to help the MPO assess its progress toward its visions.