DEDICATED BUS LANE PROJECTS

Recommendations for Funding under the Long-Range Transportation Plan's Complete Streets Investment Program

Description

The Boston Region Metropolitan Planning Organization (MPO) would coordinate with the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), and regional transit authorities (RTAs) in the region to identify opportunities to flex the MPO's discretionary funding to dedicated bus lane projects under the MPO's existing Complete Streets investment program. This program would address capacity management and mobility, clean air, transportation equity, and economic vitality needs in the Boston region.

Types of Eligible Projects

The Dedicated Bus Lane Program would target specific corridors for the establishment of dedicated bus lanes for routes operated by the MBTA and the region's other RTAs. This program could include funding for pilot projects. Examples of recent dedicated bus lane projects in the Boston region that represent the types of projects that could be funded under this program include the following:

- **Arlington (MBTA Routes 77, 79, and 350):** The Town of Arlington collaborated with the MBTA to conduct a one-month dedicated bus lane pilot—between October 2018 and November 2018—on a three-mile stretch of Massachusetts Avenue. Enhancements included transit signal prioritization, bus queue jumping at traffic signals, the relocation of one bus stop, repurposed parking spaces between 6:00 AM and 9:00 AM, and a dedicated bus lane. Arlington plans to make these changes permanent in the summer of 2019.
- **Everett (MBTA Routes 97, 110, and 112):** In collaboration with the MBTA, the City of Everett enhanced a dedicated bus lane that was originally piloted in 2016 on Broadway between Glendale Square and Sweetser Circle on the inbound side of the street. Enhancements include platform-level boarding facilities and transit signal priority during peak hours.
- **Roslindale (Boston) (Ten MBTA Routes):** In 2018, the City of Boston implemented a dedicated bus lane pilot project on Washington Street between Roslindale Village and Forest Hills Station that lasted for four weeks and took place between 5:00 AM and 9:00 AM on weekdays. The dedicated bus lane prioritized the ten MBTA bus routes that travel on Washington Street between Roslindale and Forest Hills Station. The lane was also designed for use by bicyclists. It has since been made permanent.

Cost Information

To estimate costs of funding this program, the MBTA provided MPO staff with the estimated cost per mile for a dedicated bus lane in one direction; the costs would be doubled for projects that install bus lanes in both directions. They are as follows:

- Pavement markings (one lane): $190,080
- Signage/lane markings: $20,000
- Signal upgrades (assumes five): $50,000
- Bus stop relocation (assumes three): $30,000
- Basic curbing/grading: $80,000
- Design services: $55,512
- 20 percent contingency: $85,118
- **Total estimated construction costs per mile for one side of roadway: $510,710**

Staff then used this information to analyze the results of a previous MPO study that identified 114 priority corridors for the establishment of dedicated bus lanes. The corridors were identified based on where the installation of dedicated bus lanes would provide the most benefit to bus riders, as measured by the rate of delay that they encounter. To help estimate funding for these proposed projects, staff stratified segments based on ridership and found that there were 22 segments with ridership greater than 1,250 peak period passengers. The 22 segments cover approximately 17 miles of roadway. Staff calculated average segment costs for the length of each priority corridor, as shown in the accompanying table. The analysis demonstrates a method of prioritization based on ridership and rate of delay, and the MPO may choose to use a different method to prioritize bus lane projects. Staff will work with the MBTA and municipalities to prioritize projects that meet demonstrated needs and the MPO's goals and objectives.

The analysis shows that the average cost of installing a dedicated bus lane in one direction on the 22 segments with ridership greater than 1,250 peak period passengers would be $383,033; the cost to install bus lanes in both directions on these segments would be $741,873. (Some segments are one-way only.) Costs would vary based on the length of the project; the average length of the routes is 0.75 miles. Ridership is based on the 6:00 AM to 9:00 AM peak travel direction for most segments; in a few cases 3:00 PM to 6:00 PM was used instead, as noted. Note that none of the segments represent entire routes, and most riders begin their trips on preceding segments. Staff calculated the total and average two-way cost for the 22 segments. This resulted in a total cost of $17,313,069 and an average cost of $786,958 for existing priorities identified in the MPO study. Based on these estimates, staff recommends that once the goal has been established for the Complete Streets Program for *Destination 2040*, that an additional two percent is added to accommodate dedicated bus lane projects.

Takeaways for Long-Range Transportation Plan Development

- In the last LRTP, *Charting Progress to 2040,* the MPO committed to investing approximately $936,263,000 over the life of the LRTP toward the Complete Streets investment program, which accounted for about 33 percent of all LRTP funding.
- Of the projects currently programmed in the FFYs 2019–23 TIP, 33 percent of MPO target funds were allocated to Complete Streets projects.
- To accommodate dedicated bus lane projects, MPO staff recommends increasing the Complete Streets investment program goal by two percent or approximately an additional $15 million in each five-year time band.
- The development of this project category under the Complete Streets investment program aligns with state priorities outlined in the report *Choices for Stewardship: Recommendations to Meet the Transportation Future,* which was completed by the Commission on the Future of Transportation in the Commonwealth in December 2018. The report recommends that MPOs partner with municipalities, RTAs, and MassDOT to prioritize street space for transit, provide signal priority, and improve amenities for riders at bus stops. According to the report, transit is the most important tool to address congestion, and funding dedicated bus lane projects can help the MPO do so.