WORK PROGRAM

PEDESTRIAN REPORT CARD ASSESSMENT DASHBOARD

OCTOBER 4, 2018

Proposed Motion

The Boston Region Metropolitan Planning Organization (MPO) votes to approve this work program.

Project Identification

Unified Planning Work Program (UPWP) Classification

Boston Region MPO Planning Studies and Technical Analyses

Project Number 13292

Client

Boston Region MPO

Project Supervisors

Principal: Mark Abbott
Manager: Casey-Marie Claude

Funding Source

MPO Planning Contract #105757, MPO §5303 Contract #102694, and future §5303 contract

Schedule and Budget

Schedule: Twelve months after work commences

Budget: $65,000

Schedule and budget details are shown in Exhibits 1 and 2, respectively.

Relationship to MPO Goals

The Boston Region MPO elected to fund this project with its federally allocated metropolitan planning funds during federal fiscal year (FFY) 2019. The work completed through this project will address the following goal areas established in the MPO's Long-Range Transportation Plan: safety, system preservation, capacity management and mobility, clean air and clean communities, transportation equity, and economic vitality.

Background

The Boston Region MPO developed the Pedestrian Report Card Assessment (PRCA) tool as the final product of the FFY 2015 Pedestrian Level-of-Service Metric project. This work program outlines a follow up to the FFY 2015 project. The PRCA allows planners and engineers to rate the quality of the pedestrian environment along route segments and at intersections throughout the regional network of roadways, sidewalks, and shared-use paths in terms of pedestrian accommodations and safety. The intent of this project is two-fold: 1) to implement use of the PRCA tool throughout the Boston region, and 2) to create an interactive dashboard that will document the suitability for pedestrian travel of intersections and route segments throughout the Boston region's pedestrian network.

The PRCA was developed to support the MPO's objectives related to increasing the number of pedestrian trips and improving the safety of pedestrians throughout the Boston region. Pedestrian trips are influenced by pedestrians' perceived safety and comfort while traveling to a destination. In order to increase the number of pedestrian trips, it is important to address safety and comfort concerns. The PRCA provides a methodology for assessing conditions for pedestrians along route segments and at intersections throughout the Boston region's pedestrian network. Locations with high-quality pedestrian environments receive "good grades," and "poor grades" are given on report cards for elements that contribute to a sense of danger or lack of comfort for pedestrians.

Gathering PRCA scores for the Boston region and providing the data in an easily accessible online format will allow the public, especially municipalities, to understand the factors contributing to or preventing pedestrian travel at specific locations. The grades assigned to each pedestrian network route segment and intersection for the four PRCA categories are determined by performance measures that reflect conditions at each location. Providing the data for each performance measure through the PRCA dashboard will allow the public to identify which elements of a location are in need of improvement in order to encourage increased pedestrian travel.

Objectives

The objectives of the project are as follows:

1. Implement use of the PRCA tool throughout the Boston region. This will be accomplished by grading the pedestrian environment along route segments and at intersections throughout the Boston region's pedestrian network and encouraging use of the PRCA by municipalities, volunteers, students, and interested members of the public.

2. Create an interactive web-based performance dashboard that will document the pedestrian suitability of intersections and route segments throughout the Boston

region's pedestrian network. The dashboard will display the PRCA grades for public use and inform the work of planners, engineers, and decision makers throughout the Boston region.

Work Description

Task 1   Compile Working PRCA Grade Spreadsheet

MPO staff will create a spreadsheet to document each assessed location's four PRCA category grades, the raw performance-measure data used to calculate the scores, and each assessment location's level of priority for high-quality pedestrian infrastructure. The spreadsheet will calculate scores for the four grading categories – capacity management and mobility, economic vitality, safety, and system preservation – using the raw performance-measure data added to the spreadsheet. The spreadsheet will also determine the level of priority assigned to each assessed location based on the number of Transportation Equity factors present. This spreadsheet will be updated and maintained as MPO staff conduct and receive PRCAs.

Product of Task 1
PRCA Grade Spreadsheet

Task 2   Develop Web-Based Performance Dashboard

MPO staff will create an interactive, web-based map that will allow the public to search for and review route segment and intersection PRCAs. The dashboard will include each assessed location's four PRCA category grades, the raw performance-measure data used to calculate the scores, and each assessment location's level of priority for high-quality pedestrian infrastructure.

The dashboard will include a map for each of the four grading categories – capacity management and mobility, economic vitality, safety, and system preservation – with the scores for all assessed locations. Users will be able to view the report card for each graded pedestrian network route segment and intersection. Users will also have access to a map of the Boston region that documents where conditions are met for each Transportation Equity factor and the resulting level of priority for high-quality pedestrian infrastructure.

Product of Task 2
Web-based PRCA performance dashboard

Task 3   Make PRCA Available for Grading and Submissions

MPO staff will share the PRCA tool throughout the Boston region to raise awareness of the resource and encourage members of the public to grade pedestrian network intersections and route segments in their municipalities. MPO staff will ask the public to send pedestrian network route segment and intersection scores to the MPO so

that the data may be added to the PRCA Grade Spreadsheet and the web-based performance dashboard.

Subtask 3.1 Share PRCA Tool for Use in the Boston Region

Make the PRCA tool available to interested parties in the Boston region.

Products of Task 3

Route segment PRCAs

Intersection PRCAs

Task 4 Grade Boston Region Pedestrian Network Route Segments and Intersections

MPO staff will use available data, data that can be gathered using Google Maps aerial and Street View imagery, and data collected in person to grade pedestrian network route segments and intersections. For this project, MPO staff will focus on grading locations programmed in the Boston Region MPO's Transportation Improvement Program (TIP), as the project budget allows.

Products of Task 4

Route segment PRCAs for programmed TIP projects

Intersection PRCAs for programmed TIP projects

Task 5 Produce Memorandum Documenting Work

MPO staff will produce a memorandum that 1) documents the work process; 2) summarizes findings derived from the PRCA dashboard; 3) outlines how MPO staff will continue to maintain the PRCA Grade Spreadsheet and PRCA performance dashboard resources; and 4) how staff will encourage use of the tools throughout the region.

Product of Task 5

Memorandum

Demonstration of dashboard to MPO board

Exhibit 1
ESTIMATED SCHEDULE
Pedestrian Report Card Assessment Dashboard

Task	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Compile Working PRCA Grade Spreadsheet	�											
2. Develop Web-Based Performance Dashboard												
3. Make PRCA Available for Grading and Submissions												
4. Grade Boston Region Pedestrian Network Route Segments and Intersections												
5. Produce Memorandum Documenting Work												

Exhibit 2
ESTIMATED COST
Pedestrian Report Card Assessment Dashboard

Direct Salary and Overhead							$65,000

Task	Person-Weeks				Direct Salary	Overhead (99.00%)	Total Cost
	M-1	P-3	P-2	Total			
1. Compile Working PRCA Grade Spreadsheet	0.2	1.0	1.0	2.2	$2,766	$2,739	$5,505
2. Develop Web-Based Performance Dashboard	3.5	0.0	1.0	4.5	$7,587	$7,511	$15,098
3. Make PRCA Available for Grading and Submissions	1.0	1.0	2.5	4.5	$5,953	$5,893	$11,846
4. Grade Boston Region Pedestrian Network Route Segments and Intersections	0.4	2.2	3.5	6.1	$7,497	$7,422	$14,920
5. Produce Memorandum Documenting Work	1.6	1.2	3.9	6.7	$8,860	$8,771	$17,630
Total	6.7	5.4	11.9	24.0	$32,663	$32,336	$65,000

Other Direct Costs	$0

TOTAL COST	$65,000

Funding
    MPO Planning Contract #105757, MPO §5303 Contract #102694, and future §5303 contract