



## BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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Stephanie Pollack, MassDOT Secretary and CEO and MPO Chairman  
Karl H. Quackenbush, Executive Director, MPO Staff

### *MEMORANDUM*

**DATE** April 2, 2015  
**TO** Boston Region Metropolitan Planning Organization  
**FROM** Karl H. Quackenbush  
CTPS Executive Director  
**RE** Work Program for: Bicycle Network Gaps: Feasibility Evaluations

#### Action Required

Review and approval

#### Proposed Motion

That the Boston Region Metropolitan Planning Organization vote to approve the work program for Bicycle Network Gaps: Feasibility Evaluations, presented in this memorandum

#### Project Identification

Unified Planning Work Program Classification

Planning Studies

CTPS Project Number

11250

Client

Boston Region Metropolitan Planning Organization

CTPS Project Supervisors

*Principal:* Mark Abbott

*Manager:* Casey-Marie Claude

Funding

MPO Planning Contract #84053

## Impact on MPO Work

This is MPO work and will be carried out in conformance with the priorities established by the MPO.

## Background

Local, regional, and state government agencies in the Boston region are actively working on improving bicycling infrastructure to enhance safety and provide more connectivity for bicyclists, and to increase the use of bicycling as a mode of transportation. Many bicycle facilities, such as shared-use paths, on-road bike lanes, and barrier-separated bike lanes (also called cycle tracks), were constructed as a result of those efforts. Consequently, a regionwide network of these types of bicycle facilities, which connect to key destinations in the region such as town centers and transit locations, has already been developed. However, within this network, there are gaps in continuity (a gap within one path) and connectivity (a gap between one path and another path, or between a path and a roadway or transit service). These gaps necessitate the use of circuitous travel routes and reduce the efficiency with which network users can travel between key origins and destinations. The causes of these gaps include a lack of coordinated planning, a lack of funding, right-of-way (ROW) constraints, competition for ROW space, difficulties related to work that stretches across multiple jurisdictions, and physical obstructions, such as waterways, bridges, roadways, and railroads.

The Boston Region MPO staff conducted a regional study called the Bicycle Network Evaluation in 2014; the memorandum that summarized this study included a list of gaps in the Boston Region MPO area that were designated “high-priority.”<sup>1</sup> This term was applied to gaps that scored well using criteria that assessed the impact on continuity of implementing an improvement to a gap in a path. The gaps identified as having the highest-priority were those where an improvement project would have the greatest potential to improve the Boston Region MPO area’s bicycle network.

The purpose of this study is to build on the work of the Bicycle Network Evaluation by evaluating the feasibility of potential improvements to several high-priority gaps that may be considered for design and construction funding in future Transportation Improvement Program (TIP) cycles. This work additionally complements the research conducted by MAPC on regional bicycle linkages because it will address how important connections may be created within the Boston region bicycle network, increasing the number of linkages between bicycle facilities in the Boston region. The outcomes of this study will include recommendations of the appropriate type of bicycle facility—such as on-road bike lanes, cycle tracks, shared lanes, and shared-use paths—for each of the high-priority gaps selected for assessment. The findings

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<sup>1</sup> Beth Isler, MPO staff, memorandum to the Boston Region Metropolitan Planning Organization, “Bicycle Network Evaluation,” dated May 15, 2014.

and products of the study will support local, regional, and state planning efforts to provide a safe, convenient, continuous, and connected bicycle network in the metro Boston area.

## Objective

The objective of this project is to enhance bicycle safety, as well as continuity and connectivity, within the Boston Region MPO area by evaluating the feasibility of potential improvements to identified high-priority gaps within the network. This study will produce recommendations of projects for improving network continuity and connectivity.

## Work Description

### Task 1 Select Gaps for Study

Up to three of the gaps that were deemed “high-priority” in the 2014 Bicycle Network Evaluation will be selected for a detailed feasibility assessment. The selection of gaps will be based on their potential for improving bicycle continuity and connectivity within the Boston Region MPO area. Among the considerations that will be factored into the selection of gaps to be studied will be the feasibility of implementing each improvement, as well as the level of community interest and support for a gap’s proposed improvement project. MPO staff will also consider prohibitive costs, as well as adverse impacts (such as a lengthy construction period) on the community in which a gap is located.

#### *Product of Task 1*

A recommendation of up to three gaps to be evaluated

### Task 2 Collect Data

Staff will begin the data collection process by determining what steps may be needed to eliminate each gap. Staff will then attain the information needed for estimating the cost and duration of each potential project. The impacts each potential project will then be assessed and documented.

#### *Products of Task 2*

- A list of potential projects for eliminating gaps
- Documentation of the cost, duration, and benefits of each potential project

### Task 3 Develop Recommendations of Improvements to Network Continuity and Connectivity

The data will be used to develop recommendations of the steps that should be employed to eliminate each of the gaps that were selected in Task 1. The techniques expected to be the most effective for improving network continuity

and connectivity will be weighed against their associated costs and negative impacts when developing the recommendations of projects.

*Product of Task 3*

List of recommendations of projects for improving bicycle network continuity and connectivity

**Task 4 Produce Memoranda**

Staff will produce up to three memoranda to document the results of the study. The memoranda will include recommendations for each of the bicycle network gap locations assessed. The costs and benefits of the proposed projects will be compiled for each of the municipalities in which the proposed projects would be located, as well as for other members of the public who are interested in the bicycle network.

*Product of Task 4*

Memoranda

## Estimated Schedule

It is estimated that this project will be completed six months after work commences. The proposed schedule, by task, is shown in Exhibit 1.

## Estimated Cost

The total cost of this project is estimated to be \$55,000. This includes the cost of 24.9 person-weeks of staff time, overhead at the rate of 91.82 percent, and travel. A detailed breakdown of estimated costs is presented in Exhibit 2.

KQ/CMC/cmc

**Exhibit 1**  
**ESTIMATED SCHEDULE**  
**Bicycle Network Gaps: Feasibility Evaluations**

Task	Month					
	1	2	3	4	5	6
1. Select Gaps for Study	█					
2. Collect Data		█				
3. Develop Recommendations of Improvements to Network Continuity and Connectivity		█				
4. Produce Memoranda				█		

**Exhibit 2**  
**ESTIMATED COST**  
**Bicycle Network Gaps: Feasibility Evaluations**

<b>Direct Salary and Overhead</b>									<b>\$54,508</b>
Task	Person-Weeks					Direct Salary	Overhead (91.82%)	Total Cost	
	M-1	P-5	P-4	P-2	Total				
1. Select Gaps for Study	0.5	0.0	0.0	4.0	4.5	\$4,706	\$4,321	\$9,027	
2. Collect Data	0.8	0.0	0.0	5.8	6.5	\$6,764	\$6,211	\$12,975	
3. Develop Recommendations of Improvements to Network Continuity and Connectivity	0.6	0.0	0.0	4.5	5.1	\$5,294	\$4,861	\$10,155	
4. Produce Memoranda	3.2	0.4	1.2	4.0	8.8	\$11,652	\$10,699	\$22,351	
Total	5.1	0.4	1.2	18.2	24.9	\$28,416	\$26,092	\$54,508	
<b>Other Direct Costs</b>									<b>\$492</b>
Travel								\$492	
<b>TOTAL COST</b>									<b>\$55,000</b>

**Funding**  
MPO Planning Contract #84053