



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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

MEMORANDUM

DATE March 5, 2015
TO Boston Region Metropolitan Planning Organization
FROM Karl H. Quackenbush
CTPS Executive Director
RE Work Program for: Safety Analysis of Intersections near MAGIC Schools

Action Required

Review and approval

Proposed Motion

That the Boston Region Metropolitan Planning Organization vote to approve the work program for the Safety Analysis of Intersections near MAGIC Schools presented in this memorandum

Project Identification

Unified Planning Work Program Classification

Technical Support/Operations Analysis Projects

CTPS Project Number

13269

Client

Boston Region Metropolitan Planning Organization

CTPS Project Supervisors

Principal: Mark Abbott

Manager: Andrew Nagle

Funding

MPO Planning Contract #84053

MPO §5303 Contract #84080

Impact on MPO Work

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

Background

In the past several years, there has been an increase in the number of parents who drive their children to school. This increase can be attributed to a number of factors, such as school districts' implementing bus fees, and personal convenience for families. The increase has also led to larger traffic volumes at intersections in the vicinity of schools.

This study aims to provide information to the MPO, municipalities, and other entities about the location of intersections in the vicinity of schools within the Minuteman Advisory Group on Interlocal Coordination (MAGIC) subregion that may have potential safety problems.

Objectives

The principal objectives of this work program are:

1. To identify and map signalized intersections within a two-mile radius of each school within the MAGIC subregion using existing data
2. To identify and map major, federal-aid-eligible routes that have intersections within this two-mile radius
3. To identify and map the top three high-crash locations within two miles of each school and identify and map the locations that have experienced pedestrian or bicycle crashes

Work Description

Task 1 Map the Schools within the MAGIC Subregion

MPO staff will use existing data to locate and map all of the schools within the MAGIC subregion. Schools will include public and private schools for kindergarten through grade 12. Included on this map will be all major, federal-aid-eligible routes.

Products of Task 1

A map and list of all schools within the MAGIC subregion

Task 2 Identify and Analyze Crash Data of Signalized Intersections within Two Miles of each MAGIC School

MPO staff will map all of the signalized intersections within a two-mile radius of each MAGIC school, using existing data. If a school location does not have any signalized intersections within a two-mile radius, the next closest locations will be shown on the corresponding map. After mapping the signalized intersections, staff will review existing crash data (for the most recent three years) to identify the top three high-crash locations with two miles of each school. Staff will also map intersections where a pedestrian or bicycle crash has occurred.

Product of Task 2

A map showing all of the signalized intersections within a two-mile radius of each school and the signalized intersections where a pedestrian or bicycle crash has occurred

Task 3 Document the Study and Findings

Staff will produce a technical memorandum and maps presenting information on the study background, the analysis of crash locations, and the study's findings.

Product of Task 3

Technical memorandum

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 \$22,250. This includes the cost of 9.2 person-weeks of staff time and overhead at the rate of 91.82 percent. A detailed breakdown of estimated costs is presented in Exhibit 2.

Exhibit 1
ESTIMATED SCHEDULE
Safety Analysis of Intersections near MAGIC Schools

Task	Month					
	1	2	3	4	5	6
1. Map the Schools within the MAGIC Subregion						
2. Identify and Analyze Crash Data						
3. Document the Study and Findings						

Exhibit 2
ESTIMATED COST
Safety Analysis of Intersections near MAGIC Schools

Direct Salary and Overhead							\$22,250
Task	Person-Weeks				Direct Salary	Overhead (91.82%)	Total Cost
	M-1	P-4	P-3	Total			
1. Map the Schools within the MAGIC Subregion	0.3	0.5	1.0	1.8	\$2,289	\$2,102	\$4,391
2. Identify and Analyze Crash Data	0.3	0.5	1.0	1.8	\$2,289	\$2,102	\$4,391
3. Document the Study and Findings	1.3	0.0	4.3	5.6	\$7,021	\$6,446	\$13,467
Total	1.9	1.0	6.3	9.2	\$11,599	\$10,650	\$22,250
Other Direct Costs							\$0
TOTAL COST							\$22,250

Funding

MPO Planning Contract #84053
MPO §5303 Contract #84080