



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, MassDOT Secretary & CEO



2020 RESEARCH PROJECT STATEMENT

Research Topic:

Understanding Asset Management Systems Utilized by Municipalities in Massachusetts
[max award - \$200,000]

Problem Statement and Objectives

Massachusetts has approximately 36,700 centerline miles of roadways. About 3,000 miles are MassDOT jurisdiction and 33,700 miles are municipal or other jurisdictions. Conditions on MassDOT's 3,000 miles are reported annually to the legislature and 3,361 miles of NHS roadways are reported through the Highway Performance Monitoring System. Combined, this represents only 11.4% of the Commonwealth's 36,700 roadway miles. Condition data on the remaining 32,500 (88.6% of the mileage) remains unreported. Many cities and towns have implemented asset management systems utilizing differing approaches including utilize in-house staff, consultant contracts, universities and contracts with MPO's. Countless tax dollars have been spent on local pavement management systems, but there is no infrastructure in place to compile this data beyond the local level reporting. The goal of this research is to compile the local pavement management data, harmonize and report the pavement condition data.

Pavement management systems have many uses. They begin with the most fundamental condition reporting, and establish benchmarks from which to monitoring performance trends. Pavement management systems also allow modeling that predicts future performance based on differing spending levels. At their highest level, pavement management systems provide a platform for optimized project selection to maximize the benefit of every dollar spent.

The research under this problem statement represents a preliminary exploratory phase which will require development and execution of an Internet survey in conjunction with field visits to town and cities in Massachusetts. The purpose of the survey and the field visits are to collect the data necessary to help identify and understand the asset management systems currently utilized.

Objectives:

1. Catalog the different asset management systems being used by cities, towns (municipalities) and Regional Planning Agencies (RPAs) throughout Massachusetts.
 2. Prepare a report describing the different asset management systems used, type of data collected, and how that data is being utilized in pavement preservation decision-making. The report would also include recommendations on how MassDOT can work with local and regional partners to assess pavement condition and future reporting.
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Anticipated Outcomes and Deliverables

- It is anticipated that the research will provide a current state-of-practice regarding the asset management systems used by town and cities (municipalities) and RPAs throughout Massachusetts in regards to pavement preservation activities, and how MassDOT can work with our local and regional partners on the reporting of this data.