

Research Summary

Best Practices for Cost Recovery

Research Need

MassDOT is looking to improve its cost recovery procedures for construction projects which will help to hold designers accountable for their mistakes, improve overall design quality, and save resources.

Goals/Objectives

The objective of the research was to gather and analyze information regarding best cost recovery practices used by State DOTs and to modify and enhance as appropriate existing MassDOT Cost Recovery Procedures previously revised in 2017.

This research provide stakeholders with:

- Best cost recovery practices for design errors and item omissions in construction projects;
- Methods of preventing or reducing design errors and item omissions; and
- A tool or a set of recommendations to improve the design phase and pre-construction process.

Deliverables include a set of flowchart guides that will help MassDOT to prevent or minimize errors and omissions and to improve overall design quality.



Methodology

In order to achieve project objectives, the Research Team is going to carry out the following tasks:

Task 1: Review of Current Cost Recovery Procedures and Practices. The research team will conduct a detailed literature search on past and current state DOTs' cost recovery practices and experiences with an emphasis on highway infrastructure construction projects

Task 2: Information Analysis. The Research Team will analyze the collected data and prepare a synthesis of the best methods and practices of cost recovery.

Task 3: Reporting of Results. The Research Team will prepare and deliver the Final Report to MassDOT. The report will include a set of recommendations to improve current cost recovery procedures.

Key Findings

The Research Team found that many key elements listed above are included in the current MassDOT Cost Recovery (CR) Procedure. Overall, the completeness and level of detail of the 2017 MassDOT CR procedure are on a similar level with the elite group of six state DOT CR Procedures analyzed in this report. A few areas where the current MassDOT CR procedure could be improved include the following:

- Develop a more concise and clearer definition of key terminology, and use it consistently in contract documents; Caltrans and FDOT can be used as examples.
 - Revise the evaluation of potential Errors&Omissions (E&O) to focus on negligence and/or the failure to adhere to the standard of care. Appropriate language should be added to all design projects with the Department.
 - Encourage the Designer's involvement in the construction and early operation stages of the project.
 - Reconsider the threshold to initiate a CR process; the current amount of \$5,000 is based on the 1997 CR policy and much lower construction costs. Consider at least \$20,000 for a single occurrence and \$50,000 for cumulative occurrences.
 - Consider establishing a threshold to initiate litigation. Consider at least \$100,000 as a starting point.
 - Improve the Designer evaluation process: consider the implementation of evaluation methods outlined in Caltrans and FDOT CR policies; and establish a Designer's rating database with the Department.
 - Expand a training program on both project delivery and cost recovery process for MassDOT employees, Designers, and construction contractors. Such training could be offered through the Bay State Roads Program. The training can be added to the existing training program.
- Finally, it is recommended that MassDOT Highway Division provide a higher level of oversight for the large (particularly those over \$10 million dollars of initial certified estimate of cost) and complex construction projects.

Project Information

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Key Words:

Cost Recovery Procedures and Policies; Transportation Infrastructure Construction Projects; Design quality

Use of Findings

This report provides MassDOT with a review and analysis of best cost recovery practices to address design E&O in transportation infrastructure construction projects and offers a set of recommendations to improve MassDOT's current cost recovery procedures. The report includes a set of modified flowchart guides designed to assist MassDOT's Cost Recovery Unit in preventing or minimizing potential design E&O during the early stages of project development. It can also be used to improve the efficiency of cost recovery procedure during the later stages of construction projects.

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