Scope of Work

Risk Management Strategy for Bridges and Structures

The result of this research would be the identification and development of strategies, measures, and/or systems and methods for our agencies to use in a risk management approach to managing our bridges and structures.

Task 1 - Literature Review

The researchers will review previous work done on this topic including work in other fields of engineering, other governmental agencies and/or private businesses and corporations.

Task 1 Deliverable – Synthesis Report

Task 2 - Survey

Develop and conduct a survey of transportation agencies to identify existing risk management strategies and/or systems with emphasis on bridges and structures. Identify the data, information, and criteria that each agency uses.

Deliverable – Summary Report

Task 3 - Risk Management Strategy

The objectives of this task are:

- Conduct an assessment of existing risk management practices from the surveyed transportation agencies, to identify what is currently being done and potential improvement areas.

- Develop a recommended risk management approach that agency decision makers can systematically use for limiting risk exposure related to bridge & structure management.

The risk management strategy is to provide transportation agency management with an approach for short and long range decisions with regards to bridge and structure management. As a minimum, the recommended strategy shall include the following elements:

- Define criteria to be used in analysis, including assessment of existing bridge and structure inventory data and possible additional data that may need to be collected. Evaluate effectiveness of existing bridge management data.

- An approach that has the ability to demonstrate the overall risk level and critical deficiencies of bridges and structures based on:

  - Current condition of structure inventory
  - Ages of structures
  - Structure types
  - Importance of the highway system
  - Deterioration rates
  - Inherent deficiencies
  - Functional adequacy
  - Exposure to natural and security–related disasters

- Ability to develop cost estimates associated with risk abatement for prioritization and programming purposes.

- Defined criteria to be used in the risk analysis, including assessment of existing bridge and structure data inventory and possible additional data to be collected. Evaluate effectiveness of existing bridge management data.

- Development of suitable performance measures and methods to set targets levels.

- Methods for assessing and adjusting performance measures, trend analysis and feedback analysis.

Deliverables – Draft Report and Presentation

The researcher will submit a draft report and orally present the draft findings to the AASHTO Subcommittee on Bridges and Structures Technical Committee T-18 Bridge Management, Evaluation and Rehabilitation for consideration.

Task 4 - Final Report

The researcher will update the draft report by incorporating comments and suggestions from task force and AASHTO committee members.

A final report will be prepared and submitted to the research task force for final review and approval. The final report will be copied and distributed to sponsoring agencies and member states.

Deliverable – Final Report