



Request for Information

True Costs of Winter Maintenance Operations Research Project

Background

State Departments of Transportation are under constant pressure to justify their snow and ice program budgets and to look for new approaches to saving money, such as hiring private contractors and reducing level of service. To effectively defend current budgets and request additional needed funds, winter maintenance professionals need a better understanding of the costs associated with their operations, how these costs compare with other similar states, and opportunities for reducing spending that will not negatively impact level of service.

The Clear Roads pooled fund research program (www.clearroads.org), which is led by the Minnesota DOT (Mn/DOT), has begun scoping a research project to address this information gap but needs help from the research community to define a project that is realistic and achieves the goals. This Request for Information solicits feedback from winter maintenance researchers on the draft research scope presented below. Clear Roads will review and incorporate the feedback received and then issue a national Request for Proposals for the project.

Research Project Goals

The goal of this research project is to develop a tool that will help winter highway professionals better estimate true costs for snow and ice removal, make cost comparisons with states that have similar climates and roadways, and consider new budget scenarios based on the successes of other agencies.

Potential Tasks

Task 1 – Develop a map of weather severity zones

Work with the Clear Roads and other participating states to establish roughly three to six weather zones per state (to allow for variations within the state) that will facilitate comparison of average winter severity from one geographical area to another. This should include the consideration of snowfall amounts, number of storms, average storm hours, temperatures, etc. The result should be a map that illustrates a methodology for understanding average winter severity similar to maps that display plant hardiness zones.

Task 2 – Identify cost categories

Identify all the components of snow and ice control that need to be considered to facilitate the internal and inter-agency comparison of costs, such as labor, materials, equipment and other. Costs associated with both private contracting and state agency labor should be considered. However, the researchers should assume a single level of service (bare, wet pavement) and no anti-icing. The resulting costs will be in the form of cost per inch of snow per lane mile. The goal is to be able to calculate the true costs of snow and ice control and share the results convincingly with management, the legislature and other audiences.

Task 3 – Develop a prototype tool

Develop a prototype tool or draft model (could be a spreadsheet or other simplified format) for testing. The researcher will input data gathered from two Clear Roads states to verify the model so the data and assumptions can be reviewed and any issues identified prior to gathering information from other states. The goal is to identify gaps, strengths and weaknesses that will help ensure that data is gathered as effectively as possible from other agencies.

Task 4 – Populate the tool

Work with all 50 state agencies as well as the APWA to gather all their data on components of cost identified in Task 1. Data for all Clear Roads states should be collected at a minimum. All data should come from public agencies rather than from private contractors. Clear Roads member states will play an active role in assisting with this task.

Task 5 – Identify data gaps

Identify what data people did not have that needs research, and develop the methodologies needed to help states find the data. For example, the researcher would want to develop some metrics to help states calculate indirect costs that are otherwise hard to quantify, including suggesting assumptions people can use to identify these numbers. The data received will also be reviewed and follow-up questions or conversations may be necessary to ensure that the data collected is consistent enough between agencies to facilitate comparisons.

Task 6 – Develop final web-based tool

Develop a web-based tool that is a repository of the data collected that demonstrates the comprehensive costs of snow and ice control and also includes an algorithm to facilitate comparisons within the agency (between different locations) or between agencies. The algorithm should help complete the calculations based on cycle time, life cycle of equipment, labor costs, geography/winter severity, urban vs. rural location, cost of materials and other variables identified in Task 1. Each state will have a different cost factor and the tool will calculate these numbers to deliver it as a cost per hour or per lane mile.

Task 7 – Provide observations and guidance

Based on observations of the data collected, present several case studies highlighting effective cost saving practices, lessons learned and variables that impact costs. Provide a guidance document for the tool that will help agencies make cost comparisons and budget estimates.

Response Content – due September 15, 2010

The following will be considered minimum contents of the response and must be submitted in the order listed:

1. Company name, business address, the contact person's name, telephone and fax number, and email address (if applicable).
2. Please submit a brief response to this draft research scope by answering the following:
 - a. Does the project scope make sense? Will the tasks outlined help Clear Roads achieve the stated goals?
 - b. What changes would you suggest to the research tasks to achieve the stated goals?

- c. What skill sets do you think are required for each task?
- d. What challenges do you see with the research approach?
- e. This project currently has a \$150,000 budget. Is this reasonable? If not, how might you phase the project? What portion could be completed for \$150,000?

Questions

Questions regarding this RFI should be submitted by September 1, 2010 via email only. Answers to all questions received will be available by September 8, 2010. Send your questions to Colleen Bos at colleen.bos@ctcandassociates.com.

Delivery of Responses

All responses must be sent electronically in PDF format to Colleen Bos at colleen.bos@ctcandassociates.com. No paper copies are required. All responses must be received no later 5:00 p.m. Central Time on **September 15, 2010**.

Additional Considerations

1. This RFI is NOT a Request For Proposal, bid, or quotation. The RFI does not obligate Clear Roads or Mn/DOT to award a contract, proceed with a project, or take any other action, following publication of this RFI.
2. All material submitted in response to this RFI are public according to the Minnesota Data Practices Act, Minnesota Statutes, Chapter 13. By submitting a response to this RFI the responder agrees that the information is not proprietary or trade secret material.
3. All materials submitted become the property of Clear Roads. Materials will not be returned to the responder.
4. Responders are responsible for all costs associated with the preparation and submission of responses to this RFI.