

Project Information Form

Project Title	Development of Risk Management Strategies for State DOTs to Effectively Deal with Volatile Prices of Transportation Construction Materials (Risk Management Systems for GDOT)
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Funding Source(s) and Amounts Provided (by each agency or organization)	UTC: \$67,678.00 GDOT: \$92,493.00
Total Project Cost	\$160,171.00
Agency ID or Contract Number	UTC: 4956614 GDOT: 4956615
Start and End Dates	Start Date: May 1, 2012 End Date: December 31, 2013
Brief Description of Research Project	<p>The overarching objective of this project is to enhance transportation agencies' understanding of the opportunities, challenges and best practices for utilizing risk management strategies for the asphalt cement price volatility in transportation projects. The final deliverable of this project is a comprehensive risk management guide that systematically addresses risk management for asphalt cement price volatility. The specific research objectives are:</p> <ol style="list-style-type: none">1) Identify and analyze the latest developments and trends in utilization of risk management strategies for the mitigation of asphalt cement price risk;2) Identify key features for the most promising risk management

	<p>strategies and establish their respective potential benefits and limitations;</p> <p>3) Enhance the assessment of risk management strategies considering the strategic objectives of transportation agencies and unique project goals;</p> <p>4) Enhance the quantitative assessment of risk management strategies considering their key respective parameters;</p> <p>5) Devise appropriate risk identification and allocation matrices for the successful adoption of asphalt cement price risk management strategies; and</p> <p>6) Transform research findings into educational and professional development activities.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>(Attach Any Photos)</p>	<p>The implementation of this research will lead to the development of a comprehensive guidebook that enhances transportation agencies' understanding of the opportunities, challenges and best practices for utilizing risk management strategies in transportation construction projects. This knowledge is critical to transportation agencies as it helps them optimally utilize risk management strategies and keep up with rapidly rising material price costs and cost overruns of transportation projects. The actual plan for implementation will be discussed with GDOT research officers as the project advances forward.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>Time series analysis of asphalt cement (AC) index in the state of Georgia was conducted. Several time series models were created to explain AC index variation and predict future AC index value. This time series approach was developed and presented to Dr. Wu from GDOT Office of Materials and Research in a progress meeting.</p> <p>In addition, a transportation risk management education module was developed and taught in BC7100 class in the fall 2012.</p>
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project website 	<p>1 progress report related to time series analysis of AC index</p> <p>3 Quarterly Progress Reports submitted to GDOT</p>