

## TRANSPORTATION ENGINEERING SEMINAR

# Sustainability Metrics of Pavement Preservation and Rehabilitation

Friday, March 27, 2015

3:00pm to 4:30pm

Please join us in Schwada Building (SCOB) room 101 📍

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Sustainability is an increasingly important consideration in road building across North America. Numerous State and Provincial agencies are committed to maintaining their transportation infrastructure in a sustainable manner. One way to achieve pavement sustainability is through the combined use of environmentally sound pavement preservation and in-situ pavement recycling strategies. Pavement preservation is the use of proactive, planned strategies that extend the life of the pavement, providing a cost effective solution for asset management. In-place pavement recycling is a pavement rehabilitation strategy that reuses 100% of the existing roadway materials, conserving non-renewable resources, eliminating disposal costs, and reducing environmental impacts.

The presentation outlines the various pavement preservation and in-place recycling strategies utilized in North America to achieve sustainability. Pavement sustainability is quantified by comparing the energy consumption and greenhouse gas (GHG) emissions from various pavement rehabilitation strategies using the PaLATE software. The results indicate that pavement preservation and in-place recycling strategies are cost competitive and provide a significant reduction in energy use, aggregate consumption, and GHG emissions when compared to traditional rehabilitation treatments. Detailed discussion on these technologies and their environmental impacts are presented, as well as an historical perspective of one agency's pavement preservation and in-place recycling program.

Tom Kazmierowski is a Senior Consultant with Golder Associates Ltd. specializing in Pavement and Materials Engineering. He has over 35 years of experience in pavement/material investigation, evaluation, design, construction, preservation, and rehabilitation. He has guest lectured/presented at numerous venues and has authored/co-authored in excess of 100 technical papers, including 16 papers published in Transportation Research Records.



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