



Call for Abstracts

2015 AASHTO/TRB Conference on Transportation Infrastructure Maintenance and Operations

Des Moines, Iowa - July 2015

The American Association of State Highway and Transportation Officials (AASHTO) Highway Subcommittee on Maintenance (HSCOM) and the Transportation Research Board (TRB) Maintenance and Preservation Committees will be sponsoring a conference to provide information on the state-of-the-art and state-of-the-practice in infrastructure maintenance operations and management. The conference in 2015 will focus on Practical Innovations in Maintenance Operations and Management.

Presentations and papers describing current practices, technological innovations or the results of recent research involving maintenance and preservation of transportation facilities in the TWGs areas of interest are being solicited for the Conference on Transportation Infrastructure Maintenance and Operations to be hosted by Iowa Department of Transportation in Des Moines, Iowa in July 2015 and co-sponsored by the Federal Highway Administration in conjunction with the AASHTO HSCOM meeting.

Due Dates

Interested practitioners, administrators and researchers should submit: (a) an abstract of not more than 500 words and (b) a 100-word biographical sketch with contact information for each author to the Transportation Research Board at MMC@nas.edu by **September 15, 2014**. Each submittal should indicate if the abstract will be considered for (1) Presentation & Publication - prepare a paper for presentation at the Conference and publication in the Conference Proceedings, or (2) Presentation Only - make a presentation at the Conference on the abstract topic without preparing a paper.

Authors of accepted abstracts will be advised in early **November 2014** and invited to prepare a paper and/or make a presentation at the conference. Full manuscripts will be required by **February 1, 2015** to accommodate distribution of the published proceedings at the conference.

Questions

Send questions regarding this 'Call for Abstracts' to: MMC@nas.edu

Topics of interest:

The HSCOM's Strategic Goals are to improve the health/condition of the highway system, improve highway safety by reducing risk to travelers and workers, ensure the reliability of traffic flow, promote accountability and transparency through performance management, ensure a well-qualified and competent workforce, and promote environmental stewardship/sustainability and best practices. To address its Strategic Goals, the HSCOM is organized into five Technical Working Groups (TWGs): Bridges, Equipment, Highway Safety and Reliability, Pavements, and Roadway/Roadside.

Abstracts can be submitted addressing the strategic goals of the HSCOM as describe above. Specific topics of interest to the TWGs follow:

Bridges

- Best practices in bridge preventive maintenance
- Quantifying the benefits of bridge preventive maintenance activities
- Innovative Strategies for Communicating the value/benefits for bridge preventive maintenance activities
- Technologies to improve bridge inspection effectiveness and efficiency
- State-of-the-practice for testing, monitoring, preserving and improving the health/condition of bridges and structures
- Innovative and/or alternative methods for contracting bridge maintenance and preservation
- Performance management of bridges and structures using accurate and efficient inventory systems, performance measures and goals, and innovative reporting techniques with common terminology
- Inspection, preservation and activity specific training for bridge and structure workforce.

Pavements

- Best practices for pavement preservation treatments
- Network perspective on the allocation and justification of resources to meet preventive maintenance needs
- Quantifying the short-term and long-term benefits of effective pavement preservation treatments and programs
- Pavement preservation and maintenance guidelines, specifications, terminology and best management practices
- Using new technologies and materials to cost-effectively extend pavement life
- Incorporating sustainability into pavement maintenance
- Workforce training for pavement preservation.

Equipment

- ITS applications and Telematics – hardware, software, sensors, vehicle requirements, installation, applications, data retrieval from CANbus, data storage and use.
- Performance measures for fleet administration and maintenance operations
- Impact on the equipment fleet of decreasing work windows and/or off-peak operations.
- Keeping equipment in service in the face of declining equipment replacement budget
- Changing demographics in the workforce and shortage of trained and skilled equipment technicians in the industry
- Evolving role of industry and transportation agencies in emergency preparation, evacuation, response and recovery, and their impact on the equipment fleet
- Fleet rotation and replacement optimization
- Green fleet regulations and initiatives; Decreasing the environmental impact of equipment operations and reducing the use of traditional fuels
- Equipment mechanic training and certification
- Aging infrastructure and what new strategies will be implemented to maintain the aging infrastructure and how will equipment fleet need to adapt

Roadway/Roadside

- Wet night visibility of pavement markings
- Maintenance of cable guardrail
- Balancing roadside maintenance needs and performance with limited budgets
- Development of self-sustaining, low-maintenance roadsides
- Integrating environmental considerations into maintenance activities and assessing their impact on maintenance costs
- Implementing infrastructure (e.g., roadsides, drainage, traffic control systems) preservation programs
- Measuring the benefits and effectiveness of preservation actions
- Network perspective on the allocation and justification of resources to meet preventive maintenance needs
- Consistent/standard preservation terminology.

Highway Safety and Reliability

- Emergency and Incident Response (i.e., federal funding opportunities for states to perform incident response, SHRP2 National Traffic Incident Management Responder Training (EDC), training tools available for maintenance personnel to perform post-earthquake infrastructure assessments, and leading trends in hurricane response and cleanup,)
- Proper timing and frequency for the application of anti-icing and de-icing materials
- Innovative traffic control equipment for worker safety in mobile or stationary work zones
- Improved work zone management strategies across the whole life cycle
- The use of connected vehicles to support maintenance and performance management (incl. maintenance and fleet management systems)
- Experience utilizing SHRP2 products (Capacity & Reliability)
- Applying Capability Maturity Models to maintenance (part of the SHRP2 efforts)
- Taking a sustainable approach to winter maintenance operations – i.e., considering the environment, economy and society in decision-making
- Highway safety and reliability
- Incorporating climate change into winter maintenance operations (especially long-range planning)
- ITS connectivity (especially standards) for winter vehicle-mounted sensors and controls
- Integration of AVL/GPS into Maintenance Decision Support Systems (MDSS), maintenance management systems, and efficient plowing operations
- Winter levels of service and measures of performance
- Winter maintenance training (competency, certification, cost- effectiveness)
- Risks and benefits of outsourced winter operations
- Driver fatigue issues
- Communicating the economic and societal benefits of winter maintenance operations
- Automated road condition and maintenance performance reports from vehicle-based systems
- ITS connectivity and applications supporting