



86th Annual Meeting

Workshop Information

Saturday, January 20, 2007

100

Saturday, January 20, 2007, 9:00 a.m.-6:00 p.m., Marriott

Workshop on Interim Human Factors Guidelines for Road Systems

Thomas Hicks, Maryland State Highway Administration, presiding

Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; and Visibility Committee

NCHRP Project 17-31 "Human Factors Guidelines for Road Systems, Phase 2," calls for a workshop to be held to show potential users how the guidelines are prepared and how they can be applied to highway planning, design, and traffic engineering tasks. The workshop will also provide a brief overview of the guidelines origin, their development, and organization. An emphasis will be placed on obtaining feedback from workshop attendees as to how the HFG can be improved. Attendees input will be sought on what guideline chapters should be developed next and how the guidelines should be distributed and made available. The workshop should be of great value to highway planners, designers, traffic engineers, and safety specialists who are expected to be the primary users of the guideline. Distribution of the interim guideline is expected in the summer of 2007. The workshop will also include a short presentation by Michael Manore, Chair TRB Committee ABJ95T, on the results of the International Visualization Symposium held in Denver in October 2006.

101

Saturday, January 20, 2007, 9:00 a.m.-6:00 p.m., Shoreham

DAWG Forum on Pavement Performance Data Analysis

A. Robert Raab, Transportation Research Board, presiding

Sponsored by Data Analysis Working Group (DAWG) Committee

The TRB Data Analysis Working Group (DAWG) will sponsor this forum to discuss methods of analysis of pavement performance data. Briefings will be presented on techniques for extracting, processing, and analyzing pavement performance data bases, as well as on preliminary results of applications of these techniques. Pavement researchers, designers, and managers, as well as others interested in the analysis of data describing the development of distresses in pavements are encouraged to attend.

Information: A. Robert Raab, 202/334-2569, fax 202/334-3471, e-mail rraab@nas.edu.



86th Annual Meeting Workshop Information

Sunday, January 21, 2007

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Americans with Disabilities Act (ADA) Paratransit Demand Estimation: Results of TCRP Project B-28

Elizabeth H. Ellis, KFH Group Incorporated, presiding

Sponsored by Paratransit Committee

TCRP Project B-28 is nearing completion. A demand estimation tool developed in the project will be presented to the public for the first time at this workshop. Principal Investigator, David Koffman from Nelson\Nygaard Consulting Associates, and team member, David Lewis of HLB Decision Economics, will explain how the demand estimation tool was developed, and what the results mean for practitioners, advocates, and those who are developing policies about the future of ADA paratransit. Members of the TCRP Panel that oversaw the project will be on-hand to comment and critique the project results and talk about what additional research remains to be done. Comments and ideas for further research will be sought from those in attendance.

102

Sunday, January 21, 2007, 8:30 a.m.-noon, Marriott

Advanced Models for Asphalt Pavement Mixtures and Pavements: What Are They Good For?

Jo Sias Daniel, University of New Hampshire, presiding

Sponsored by Characteristics of Bituminous Paving Mixtures to Meet Structural Requirements Committee

As the industry moves towards implementation of the Mechanistic-Empirical Pavement Design Guide (MEPDG), researchers continue to develop and refine the next generation of models that will replace or improve upon those in the current MEPDG. At the 2005 TRB meeting, AFK50(1) sponsored a session that presented the basic ideas of the different models in a non-technical manner, explained the strengths and limitations of the different approaches, and described how these models can help to understand and predict the behavior of asphalt concrete. This workshop is a follow up to that session and will again be geared towards practitioners who are interested in learning how the emerging models being developed by researchers will help them to understand and design better asphalt mixtures and pavements in the future. This workshop will focus on the application of these advanced models. Selected experts will present a brief overview of their material model, the input parameters needed and required laboratory testing, and model verification. The practical application of the model to predict material performance (lab or field) will be presented along with a discussion on the advantages and disadvantages of the particular approach.



86th Annual Meeting

Workshop Information

103

Sunday, January 21, 2007, 8:30 a.m.-noon, Marriott

Approaches to Minimize Cracking in Concrete

Jason Weiss, Purdue University, presiding

Sponsored by Concrete Materials and Placement Techniques Committee

This workshop will provide a fresh look at best practices to avoid cracking in new construction. Specifically this workshop will discuss construction operations, specification practices, and material factors that can contribute to cracking. The program will discuss field observations and the combination of factors that frequently lead to cracking. Computational approaches will be discussed that enable cracking risk to be assessed and examples will be provided to illustrate how changes in construction operations, the environment, specifications, and materials may increase the risk of cracking. Finally, tests will be discussed that can be directly implemented to assess the risk of cracking or to obtain critical material property information that is needed for modeling. Workshop participants will gain insights from the practical examples of how minor changes may increase or decrease the risk of cracking and will receive information on practices that they can implement to reduce the potential for cracking.

104

Sunday, January 21, 2007, 8:30 a.m.-noon, Marriott

Doctoral Student Research in Transportation Operations and Traffic Control

Sponsored by Traffic Control Devices Committee

This half-day workshop consists of reports of Ph.D. student research on transportation operations and traffic control. Reports of recently completed (or nearly completed) Ph.D. dissertations and research will be presented.

105

Sunday, January 21, 2007, 8:30 a.m.-noon, Marriott

Load and Resistance Design of Concrete Bridge Superstructures

Shrinivas Balkrishna Bhide, Portland Cement Association, presiding

Sponsored by Concrete Bridges Committee

As the mandatory implementation date of the New LRFD bridge design specifications draws closer, there is an ever increasing need for the design community to have an understanding of the new specification. In an effort to further familiarize the design community with the requirements of the new specifications, this workshop will present design examples for concrete bridge structures. The examples will focus on new provisions introduced in the LRFD Specifications.



86th Annual Meeting Workshop Information

106

Sunday, January 21, 2007, 9:30 a.m.-11:00 a.m., Marriott

Long-Term Pavement Performance State Coordinators' Meeting

Victor M. Mendez, Arizona Department of Transportation, presiding

Sponsored by Long-Term Pavement Performance (LTPP) Committee

As in the past, this annual LTPP State Coordinators' Meeting provides an excellent opportunity for all attendees to discuss LTPP plans, progress, and experiences with federal, state, province, industry, and academic colleagues. This year's meeting includes presentations reviewing the activities and accomplishments of the previous year, plans for this year, and major issues concerning LTPP data collection, analysis, and product development.

Information: A. Robert Raab, 202/334-2569, Fax: 202/334-3471, e-mail rraab@nas.edu

107

Sunday, January 21, 2007, 8:30 a.m.-noon, Marriott

Making Sense of Sensors Used to Monitor Bridges

Eli Cuelho, Western Transportation Institute; Jerry E. Stephens, Montana State University, Bozeman, presiding

Sponsored by Dynamics and Field Testing of Bridges Committee

For decades, bridge owners, designers, practitioners and researchers have been monitoring bridges to assess their structural condition. These monitoring activities range from "low-tech" qualitative assessments using visual inspections to "high-tech" methods using active instrumentation and other nondestructive testing techniques.

Available technologies and techniques to accomplish this work are advancing rapidly. For those that want to use the more sophisticated methods to monitor bridges, establishing the appropriate sensors and associated data processing and analysis methodologies to achieve their specific program goals (e.g., health monitoring, load rating, etc.) can be daunting. This workshop will provide bridge owners, designers, practitioners and researchers with basic information to:

- develop an instrumentation plan;
- choose proper sensor technology(ies) based on cost, performance, availability and ease of use;
- place, align, protect and maintain sensors;
- acquire and manage data;
- analyze the data once its collected; and
- ensure long-term viability of the monitoring system.

During the workshop, participants will have the opportunity to see actual transducers and typical installation schemes, as well as, share examples of instrumentation projects, and discover new tools to help them accomplish their goals. Commonly used sensors include strain gages, temperature probes, tilt meters, accelerometers, cameras, pressure cells, extensometers, survey equipment, lasers, etc.



86th Annual Meeting Workshop Information

108

Sunday, January 21, 2007, 8:30 a.m.-noon, Marriott

Performance-based Analysis Approach to Geometric Design Decisions and Graduate Student Research Summaries

David R. McDonald, Hanson Professional Services Inc, presiding

Sponsored by Geometric Design Committee and Operational Effects of Geometrics Committee

In this two part workshop, there will be outreach for an ongoing NCHRP project and reports on graduate student geometric design research.

Part A. Performance-Based Geometric Design Analysis

Designers in every discipline endeavor to understand the probable effects of their decisions.

There is a research effort afoot exploring this goal in relation to the geometric design of highways.

The objective is to garner stakeholder input on the direction of NCHRP project 15-34, "Performance-Based Analysis of Geometric Design of Highways and Streets." The research objectives of 15-34 are to:

- Develop a practitioner guide:
 - o for conducting performance-based analysis throughout project development based on current analysis techniques and available data,
 - o that identifies data needs, sources and interfaces corresponding to specific performance measures and analyses, and
 - o that includes case studies demonstrating performance-based analysis applications at each stage of project development, including data needs.
- Articulate a vision for performance-based analysis of geometric design of highways.
- Recommend revisions to the AASHTO A Policy on Geometric Design of Highways and Streets that are supported by the research, provide mutual support to the guide, and are consistent with the guide.

The workshop will begin with prepared presentations as a means initiating dialogue among all workshop participants.

Project 15-34 stakeholders include state highway agency and consultant design staffs, researchers and academics that are involved in the areas of: design, safety and operations. The workshop will be interactive, geared towards obtaining participant feedback regarding the progress and direction of the research and maximizing the potential of broad implementation of the performance-based analysis guide. Presentations and interactive discussions will include:

- Introduction to transportation performance and the role and value of performance based geometric design analysis;
- Identification of performance measures at different stages of project development (e.g. purpose and need, preliminary design and alternatives assessment, final design);
- Linking design and project development processes to agencies objectives.
- Targeting performance measures sensitive to geometric design decisions;
- Review and assessment of completed and ongoing performance-estimating tools and research and the practicality of their use during project development;
- Additional capabilities needed for performance based analysis;
- Candidate conceptual outlines and formats of the performance based analysis guide.

Part B. Graduate Student Research.



86th Annual Meeting Workshop Information

Graduate students will report on geometric design research. Reports of recently completed or nearly complete dissertations and theses will be presented.

109

Sunday, January 21, 2007, 8:30 a.m.-noon, Marriott

Using Lidar for Design and Construction

Curtis A. Clabaugh, Wyoming Department of Transportation; David B Zilkoski, National Geodetic Survey, presiding

Sponsored by Geospatial Data Acquisition Technologies in Design and Construction Committee

This workshop will give an overview of topographic Lidar as a mapping tool and describe some of the applications currently being utilized by the mapping community. The workshop will also highlight the best practices used to produce topographic Lidar data and the "value-added" capability of a sensor fusion approach. Reasonable expectations and limitations to using this technology will be discussed. The project manager will gain insight for using this tool for the correct application to achieve the desired results.

110

Sunday, January 21, 2007, 8:30 a.m.-noon, Shoreham

A Dialogue On Multiple Stakeholder Participation in Regional Transportation System Planning

Kenneth P. Stackpoole, Embry-Riddle Aeronautical University; Alan Thompson, Southern California Association of Governments, presiding

Sponsored by Intergovernmental Relations in Aviation Committee

This workshop will provide a forum for a dialogue on intermodal, interagency, interjurisdictional, multiple stakeholder involvement in the Planning and Implementation of Regional Transportation Systems. We believe certain key stakeholders are not currently participating in the deliberations at the national and regional level. These deliberations should include discussion of best practices, problems of coordination, identifying gaps in the body of knowledge, and proposing solutions. Invitations will be extended to a number of professional associations, under-represented levels of government, quasi-governmental agencies, including all modes of transportation, and a diversity of academic interests, such as: local transportation executives, MPOs, National Mayors Conference, American Planning Association, National Association of Regional Councils, Air Freight, Commercial Airlines, Public Administration Schools, National Association of Schools of Public Affairs & Administration, American Society for Public Administration, and others.

111

Sunday, January 21, 2007, 8:30 a.m.-noon, Shoreham

Integrating Incident and Emergency Management into Traffic Management Centers

Sponsored by Critical Transportation Infrastructure Protection Committee; Regional Transportation Systems Management and Operations Committee; Intelligent Transportation Systems Committee; and Freeway Operations Committee



86th Annual Meeting Workshop Information

This workshop addresses the planning and subsequent development of a concept of operations for Traffic Management Centers (TMCs) that would allow them to perform more comprehensive emergency and incident response actions in an integrated manner with public safety agencies. With the close relationship to the National Unified Goal for Traffic Incident Management, a summary of the progress and the next steps foreseen in this process will be presented. With an ever-increasing emphasis on security and emergency management, presentations of the interrelationship between these issues and traffic incident management will be presented in a context of TMC operations.

112

Sunday, January 21, 2007, 8:30 a.m.-noon, Shoreham

FAARFIELD (FAA Rigid and Flexible Interactive Elastic Layer Design): New FAA Design Software for Airport Pavement Thickness

David R. Brill, Federal Aviation Administration, presiding

Sponsored by Aircraft/Airport Compatibility Committee

The FAA will soon introduce a new software program for airfield pavement design, called FAARFIELD (FAA Rigid and Flexible Interactive Elastic Layered Design). FAARFIELD incorporates a 3D finite element structural model for rigid pavements and overlays, and layered elastic analysis for flexible pavements. The FAA will conduct this half-day training workshop to help airport pavement engineers as well as airport owners and operators become familiar with this new program and changes from the current design standards in FAA Advisory Circular 150/5320-6D. The workshop will include lectures, discussions, and demonstrations with worked design examples.

113

Sunday, January 21, 2007, 8:30 a.m.-noon, Shoreham

Research Needs for Mainstreaming Context Sensitive Solutions (CSS) in Transportation Project Development

Scott D. Bradley, Minnesota Department of Transportation, presiding

Sponsored by Context Sensitive Design/Solutions (CSD/CSS) Task Force; Geometric Design Committee; and Landscape and Environmental Design Committee

Context Sensitive Solutions (CSS) is a collaborative, multidisciplinary, and integrated approach that involves stakeholders in developing and maintaining transportation facilities that fit their physical settings while preserving or enhancing aesthetic, scenic, historic, environmental, and community resources in balance with safety and mobility needs. While steady progress has continued to occur in recent years, the "mainstreaming" of CSS philosophy, principles, and "practice" remains a challenge in transportation public works across the country. A growing body of recent and emerging research, lessons learned, and best practices continues to inform broader and more successful application of CSS ... and yet considerable obstacles remain prevalent in the form of knowledge gaps, assumptions, paradigms, and what may be best termed as organizational resistance. The objectives of this workshop are twofold: 1) to broadly inform the identification of current obstacles to the mainstreaming of CSS in transportation project



86th Annual Meeting

Workshop Information

development and 2) to identify the strategic, high priority research needs that are most likely to advance the mainstreaming of CSS in transportation project development across the country ... if those research needs are met.

114

Sunday, January 21, 2007, 8:30 a.m.-noon, Shoreham

Unscrambling the Alphabet Soup: An Overview of the Who, What, When, and Where of Research in Aviation and the Environment

Katherine Andrus, Air Transport Association of America, presiding

Sponsored by Environmental Impacts of Aviation Committee

There are multiple initiatives underway to conduct, assemble and/or evaluate research on aviation and the environment -- JPDO's EIPT, ICAO'S CAEP, FAA's PARTNER COE, TRB's ACRP -- to name just a few. Confused by all the acronyms? Wondering what the differences are among them, and where they connect and/or overlap? This workshop will provide an overview of government, academic and industry research programs addressing noise, emissions and other environmental impacts of aviation. In addition, the workshop participants will learn about opportunities to get involved in research and where and how results are made available. The workshop is designed to serve as an introduction to the field for students and new practitioners as well as an update for those who have been involved in this area for some time.

115

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Accountability and Performance: How Some State Departments of Transportation Are Reporting on Performance and Results

Nick Mandel, New Mexico State Highway and Transportation Department, presiding

Sponsored by Strategic Management Committee; Management and Productivity Committee; Performance Measurement Committee; and Transit Management and Performance Committee

This workshop is designed for transportation agency staff and consultants interested in learning how state DOTs report on performance, results, and accountability. DOTs report on performance using different kinds of measures, in diverse formats, and with various stakeholders in mind.

Presentations by select DOTs will discuss the kind of measures and performance they report on, why these categories of data and information were selected for reporting, the audience for which this information is intended, and how it is communicated.

Following the presentations, there will be a panel discussion and interaction with workshop attendees.

116

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

The New Wave of Travel Demand Modeling and Simulation, Part 1 - Past the Starting Gate: New Activity Based Models Currently Under Development at



86th Annual Meeting

Workshop Information

Planning Agencies

Charles L. Purvis, Metropolitan Transportation Commission, presiding

Sponsored by Transportation Demand Forecasting Committee and Moving Activity-Based Approaches To Practice Task Force

This workshop describes five activity-based models currently under development. These five models build upon the foundations established in the original wave of activity-based model development. Since the details of this second wave of activity-based models have not yet been widely disseminated, the processes for developing the models, the data used, and, where applicable, the model results obtained will be presented. Up to the minute status reports will be provided.

117

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Advanced Computing Applications in the Delivery of Flexible Transport Services

James Michael Cooper, Transport to Employment, presiding

Sponsored by Artificial Intelligence and Advanced Computing Applications Committee

The delivery of traditional public transit has advanced significantly, over time, with the development and application of specialist computing solutions. More recent developments in flexible and door-to-door transport may also contribute to an integrated transport service and substitute for traditional modes in rural and less populated areas. Flexible transport offers differing solutions and may require differing approaches in scheduling, location, and booking systems and includes a differing approach to service provision, support, and related computing applications. This workshop is intended to identify and explore technologies specific to flexible transport services.

119

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Dynamic Assignment Models for Practitioners

James E. Hicks, PB Consult Inc, presiding

Sponsored by Transportation Network Modeling Committee

In an effort to help transition dynamic network models from academic research to practical use by public agency staff and consultants, the Network Modeling Committee at TRB proposes a half-day workshop oriented towards issues important to practitioners. The workshop will include presentations intended to: introduce potential users to terminology and important practical assumptions of the models, demonstrate real-world applications of dynamic traffic assignment, identify other potential uses and current developments in dynamic traffic assignment research, and provoke thought on potential barriers to implementing advanced network modeling procedures from user's perspectives. This Sunday workshop will prepare participants for more meaningful participation in presentation sessions and poster sessions on dynamic network models that will be sponsored by the Network Modeling Committee.

120



86th Annual Meeting Workshop Information

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Early Lessons Learned in Implementing SAFETEA-LU Environmental Provisions

Shari M. Schafflein, Federal Highway Administration, presiding

Sponsored by Environmental Analysis in Transportation Committee

Much of the new rulemaking and guidance for environmental process and funding provisions has been issued. The timing is ripe to gather a wide variety of practitioners and compare experiences in implementing the SAFETEA-LU environmental provisions. This workshop will focus on the following provisions: Section 6005-the 5 State Delegation; Section 6004-delegation of environmental approvals for Categorical Exclusions projects to States; Section 6009-Section 4(f) amendments; Section 6001-planning provisions for increased resource agency and stakeholder consultation to compare plans and identify mitigation opportunities; and Section 6002-the new review process for FHWA and FTA Environmental Impact Statement projects. The Workshop will close with an Open-Mike session to address other environmental process or funding issues such as Section 1503-Design Build and NEPA; Section 6010 Intelligent Transportation Systems categorical exclusions; Section 6007-exemption from considering the bulk of the Interstate Highway System as a historic property; and, Section 6006-environmental restoration and pollution abatement funding eligibilities

121

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

GIS and Transit: Multiple Applications and Opportunities

Martin Catala, University of South Florida, presiding

Sponsored by Geographic Information Science and Applications Committee and New Public Transportation Systems and Technology Committee

Transit is an area where there's increasing interest in vehicle tracking and traffic probing, and this workshop is timely in an age of \$3.50/gallon gasoline. The workshop provides real-world experience and insights on the effective use of GIS at transit agencies and the benefits from embracing the technology.



86th Annual Meeting Workshop Information

122

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

How to Decide Between Good but Competing Ideas Without Bloodshed: Problem-Solving Techniques That Work

Judy Meyer, Public Information Associates, presiding

Sponsored by Public Involvement in Transportation Committee

To examine opposing viewpoints about transportation alternatives more constructively among community groups, advisory committees, and other decision-making panels, this workshop focuses on a technique for looking at all of the arguments for and against a decision through a specialized method of weighing pros and cons. This analysis will help strengthen the forces supporting a decision and reduce the impact of its opposition.

123

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Innovations in Transportation Finance

Suzanne H. Sale, Federal Highway Administration, presiding

Sponsored by Taxation and Finance Committee and Congestion Pricing Committee

This workshop is designed to advance the state of the practice in transportation finance, continuing the dialogue with transportation officials, practitioners, and researchers on the challenges of financing and delivering out transportation systems. The workshop will provide a range of perspectives on new funding structures, options, and tools to meet future transportation needs. In addition, it will provide an opportunity to showcase new public-private partnership initiatives and share international experiences. Current research initiatives addressing the efficacy of the Highway Trust Fund and alternative funding approaches will also be highlighted. In the afternoon, attendees from this workshop and those from the Congestion Pricing Workshop will meet jointly for a half-day session.

124

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Linking Archived Data User Service, Performance Measures, and Freeway Operations to Improve Mobility

Karl Petty, Berkeley Transportation Systems, presiding

Sponsored by Highway Traffic Monitoring Committee; Urban Transportation Data and Information Systems Committee; and Archived Data User Service (ADUS) Subcommittee

Effective management of the freeway system requires a long chain of properly working systems, methodologies, and institutional support structures. This chain can be thought of as a feedback control loop operating on the freeway system in order to improve mobility. The chain includes the following parts: monitoring of the freeway system with various intelligent transportation system devices; proper storage and archiving of the collected data; diagnostics and cleansing of the data; computation of the appropriate performance measures; organization and presentation of the performance measures to users; and operational control strategies based on these performance



86th Annual Meeting

Workshop Information

measures. A similar type of feedback loop has been fruitfully mined at longer time scales by planners. This workshop focuses on shorter time scales. Specifically, data collection, performance measures, and decisions that can be made over the course of weeks or months to improve freeway performance are considered.

125

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Programs and Practices to Enhance Waste Management, Conserve Resources, and Practice Sound Environmental Management in DOTs

David E. Soltis, Consultant, presiding

Sponsored by Waste Management and Resource Efficiency in Transportation Committee

This workshop will present current practices and the latest research on efforts to integrate proactive environmental management, resource conservation, and sustainability concepts into the decision making and day-to-day operational activities of DOTs. These efforts include resource efficiency, toxic and hazardous materials tracking, pollution prevention, product substitution and green designs, recycling and reuse of materials, advances in environmental site assessment technologies and methodologies, and brownfields programs. These presentations will identify actions that can be readily implemented by and the "real world" environmental and business benefits that could be attained by DOTs.

126

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Tools for Transportation Asset Management

Simon Lewis, GIST-MAN Inc, presiding

Sponsored by Transportation Asset Management Committee

This workshop reviews currently available tools that attempt to support a comprehensive asset management framework within a transportation agency (sometimes referred to as an asset management business framework, AMBF). Tools covered include HDM-4, HERS, the Washington DOT model, and other tools currently in use in North American agencies, as well as those used in international best practice. The workshop covers demonstration of tools, current progress, and areas where key work needs to be undertaken and allows for participant interaction and discussion. Earlier versions of this workshop were given previously at state transportation agencies and national conferences in North America.

127

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Transportation for Development: Past Performance and Strategies for the Future

Marc Juhel, The World Bank, presiding

Sponsored by International Activities Committee

This workshop is designed for both practitioners and researchers. It will provide an overview of the effectiveness and impact of improvement in transportation services over the past decade



86th Annual Meeting Workshop Information

based on World Bank research and post-evaluation of projects. The workshop will offer a strategic approach for maximizing the future development and poverty impact of transportation in the developing world while simultaneously addressing correlated issues pertaining to health, environment, energy use, and overall economic competitiveness.

The workshop will offer factual and statistical information, coupled with explicit policy options designed to help policymakers devise a development roadmap factoring transport as a key contributor to a balanced and sustainable growth strategy. The lessons and perspectives, although mostly drawn from developing countries, will be of high relevance to all partners, at the federal, state and local levels.

128

Sunday, January 21, 2007, 8:30 a.m.-5:00 p.m., Marriott

Load and Resistance Factor Design (LRFD) Method for Bridge Substructures

Andrzej S. Nowak, University of Nebraska - Lincoln, presiding

Sponsored by Foundations of Bridges and Other Structures Committee

By 2007, the State Departments of Transportation are required to design substructures of bridges using AASHTO LRFD Code. The objective of this workshop is to assist geotechnical and bridge engineers with presentations on the LRFD approach to design of substructures and explain the differences between LRFD and Standard Specifications, with practical examples. The Workshop will include presentations on loads and load combinations, and limit states of bridge substructures; design of abutments, retaining walls, and piers; mechanically stabilized earth walls and abutments; and design of piles, drilled shafts, and spread footings.

129

Sunday, January 21, 2007, 8:30 a.m.-5:00 p.m., Marriott

Low-Volume Roads Engineering Best Management Practices

Gordon Rex Keller, USDA, Forest Service, presiding

Sponsored by Low-Volume Roads Committee and Frost Action Committee

Workshop Objectives:

1. To present the key planning, design and maintenance issues important for a good low-volume road;
2. To understand the importance of environmental protection for roads and discuss the environmental mitigation techniques available today;
3. To discuss appropriate technologies available and applicable to low-volume roads;
4. To list useful supporting references and web sites, by topic, available today on roads issues.



86th Annual Meeting Workshop Information

130

Sunday, January 21, 2007, 8:30 a.m.-5:00 p.m., Marriott

Operating Traffic Signal Systems in Oversaturated Conditions

Kevin N. Balke, Texas Transportation Institute; Peter J.V. Koonce, Kittelson and Associates, Inc., presiding

Sponsored by Traffic Signal Systems Committee and Regional Transportation Systems Management and Operations Committee

This workshop will focus on the challenge of traffic signal control in oversaturated conditions. The workshop will address issues related to defining, detecting, and measuring congested conditions; strategies and philosophies for management of traffic in congested conditions including multi-modal stakeholder (vehicles, transit, goods movement, and pedestrians) objectives. The standard of practice will be presented and discussed. New research topics will be identified to help address areas that need improvement or where we have insufficient experience

131

Sunday, January 21, 2007, 8:30 a.m.-5:00 p.m., Marriott

Training New Engineers in Railway Design and Maintenance

Willem Ebersohn, National Railroad Passenger Corporation; Thomas P. Smithberger, HDR Engineering, Inc.; David E. Staplin, National Railroad Passenger Corporation, presiding

Sponsored by Railroad Track Structure System Design Committee; Railway Maintenance Committee; and Rail Transit System Design Committee

This workshop begins with a keynote address by Dr. John Samuels (recently retired Norfolk Southern). Dr. Samuels' address will be followed by a series of morning presentations that focus on U.S. railway engineering design education and training needs and include: AREMA Committee 24 – Engineering Education; U.S. and European professors teaching railway engineering; a Class 1 railroad perspective; and a consulting engineering firm performing railway design. The afternoon session will focus on railway engineering maintenance and training needs. It will include educators; a Class 1 railroad; and a practitioner involved with railroad maintenance and its education and training needs.

Following the presentations, a summary of the workshop will be given and Mike Franke, Amtrak, will then lead a panel discussion with all presenters.

132

Sunday, January 21, 2007, 8:30 a.m.-5:00 p.m., Shoreham

Exploring the Environmental and Economic Implications of Alternative Fuels for Aviation

Katherine Andrus, Air Transport Association of America; Charles R. Chambers, Jr., Airports Council International - North America, presiding

Sponsored by Environmental Impacts of Aviation Committee and Aviation Economics and Forecasting Committee

This workshop will examine the potential to reduce environmental impacts associated with aviation through the development and use of alternative fuels for aircraft and ground equipment as well as the economic drivers involved. Presentations by government, academic, environmental



86th Annual Meeting

Workshop Information

and industry representatives will highlight the state of research on several candidate substitutes for the kerosene products currently used by commercial and military aircraft, including gas- and coal-derived synthetic fuels, biofuels and hydrogen. The "cradle to cradle" costs and impacts (i.e., obtaining raw materials, production/refinement, usage and by-product/waste disposal) of each of these alternative fuels will be explored using the best available science. Data gaps and future research needs will be identified, and workshop participants will be invited to share their views on near-term and long-term issues to be addressed.

133

Sunday, January 21, 2007, 8:30 a.m.-5:00 p.m., Marriott

Air Quality Transformations around the World--What to Do When the Rubber Hits the Road, Part I: Latin America; Part II: Istanbul at a Crossroads

Lee Schipper, World Resources Institute, presiding

Sponsored by International Activities Committee

This workshop will examine improvements in air quality achieved through transit services. Part I will focus on developments in Latin America, and Part II will focus on developments in Turkey, a country at the crossroads of Europe and Asia.

For the past two years, this workshop has focused on a number of transportation challenges and solutions in Latin America, particularly in Mexico. This year, the workshop will examine successes in Mexico as well as other key Latin American countries, primarily Chile and Brazil. The workshop will discuss whether developments in parts of the "New World" (North and South) can be exported to the "Old World", specifically Istanbul. The challenge is to facilitate implementation of clean transport solutions, regardless of the geographical, cultural, or economic context.

The afternoon session will explore the pressures facing a world heritage mega-city, Istanbul. In addition to harboring millennia of both "Western" and "Eastern" histories, Istanbul is home to over 12 million residents on both the European and Asian sides of the Bosphorus River. As a city with a high degree of individual motorization, a large bus system, limited metro and light-rail service, and hundreds of mini buses, ("dolmus"), Istanbul has traffic and mobility headaches. Indeed, the dolmus are hauntingly similar to "colectivos" and "clandestinos" in Latin America, demonstrating the importance of small buses in much of the world.

The similarities between the "Old" and "New" Worlds do not end here. As in Latin American Cities, all of the vehicles in Istanbul produce increasing levels of smog. The congestion exposes Istanbul's citizens to particulates and other air pollutants. In short, transport trends in Istanbul are unsustainable. The smog is worsened by emissions from ferries and international shipping in the Bosphorus and the Sea of Marmara, where a kind of marine congestion leaves many large ships waiting for their turn to enter into the Bosphorus.

With its entrance into the European Union, Turkey will be closely scrutinized, with particular attention to air pollution, traffic safety, and related congestion, leaving Istanbul at a geographical and transportation sustainability crossroads.

The afternoon session will explore some of the transportation and environmental challenges Turkey faces, as well as some of the solutions. Information will include how new developments in the large bus system, using Bus Rapid Transit, could give this important mode a rebirth despite



86th Annual Meeting

Workshop Information

rising competition from individual vehicles. Will the BRT model from Latin America or elsewhere work? The use of information technology to improve all modes of transport will be explored, as well as the options Istanbul has for reducing air pollution from motor and sea-going vehicles.

134

Sunday, January 21, 2007, 8:30 a.m.-4:30 p.m., Hilton

Emerging Issues in Transportation Pricing and Finance

Lee W. Munnich, University of Minnesota, Twin Cities, presiding

Sponsored by Congestion Pricing Committee and Taxation and Finance Committee

This workshop is designed for both practitioners and researchers to provide an understanding of emerging issues in transportation pricing and finance. Transportation pricing topics will include regionwide pricing schemes, high-performance corridors, and pricing across modes. For the afternoon portion of the workshop, from 1:30 p.m. until 5:00 p.m., attendees from the Innovations in Transportation Finance workshop will join those from this workshop for joint presentations and discussions on finance. The workshop will include information on helping to manage the expectations of policy leaders and citizens on transportation and finance projects; practical solutions to addressing technical, policy, institutional, and political issues related to pricing and finance strategies; and opportunities to consult with experts and practitioners on issues related to individuals' projects. Transportation finance topics will include the role of public-private partnerships, goods movement and freight issues, and innovative approaches for financing transportation infrastructure.

135

Sunday, January 21, 2007, 8:30 a.m.-5:00 p.m., Hilton

Guidelines on Conducting Project Level Air Quality Analysis

Shauna Hallmark, Iowa State University, presiding

Sponsored by Transportation and Air Quality Committee

This workshop will provide an overview of the basics for conducting a project level air quality analysis. Current changes to regulations and modeling tools will be discussed. The workshop will cover laws and regulations; analytical tools and their use; how to analyze air toxics and particulate matter; future concerns; and case studies.

136

Sunday, January 21, 2007, 8:30 a.m.-5:00 p.m., Hilton

How to Coordinate Planning and Operations

Sponsored by Regional Transportation Systems Management and Operations Committee

This one-day workshop will illustrate and demonstrate a number of ways that planners and managers of operations activities can coordinate efforts with the intent of advancing and sustaining transportation systems management and operations in the statewide and regional planning processes. The workshop will highlight these techniques through actual examples and exercises. The first part of the workshop will focus on regional aspects and will consist of



86th Annual Meeting

Workshop Information

presentations and discussions with planners and operations practitioners who are actually coordinating their activities. The topics to be addressed include: (1) use of regional and statewide operations data for planning, (2) application of analysis tools to evaluate and assess operations in regional planning, (3) development of the Congestion Management Process (CMP), (4) integration of operations into the long-range regional transportation plan, and (5) use of statewide planning data in regional operations. A highlight of the workshop will be the presentation and demonstration of an innovative tool called the Regional Concept of Transportation Operations (RCTO), which is seen as a way to integrate short-term operations into the regional transportation planning process. The second part of the workshop will focus on corridors in multi-state regions where it is essential that operations and planning activities be coordinated. Experiences will be highlighted followed by a panel discussion. The results of a recent NCHRP workshop on Multi-State traffic operations will be highlighted during this aspect of the workshop.

137

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

Human Factors in Enforcement Effectiveness

David F. Preusser, Preusser Research Group Inc., presiding

Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; and Safe Mobility of Older Persons Committee

This session will explore ways in which the integration of human factors concepts in enforcement programs can increase their overall effectiveness. Specific enforcement strategies may address:

- different behavioral theories relevant to traffic enforcement - deterrence theory in criminology; economics of crime & punishment; operant conditioning in psychology, etc;
- how to optimize the use of enforcement - different deployment style - visible vs. hidden; random vs. regular; targeted vs. general; increasing returns or diminishing returns, etc;
- different strategies for different offenders? intentional violators (lapse, judgment errors, etc) vs. intentional violators (sensation seekers, social deviance, Type A, etc); young male vs. soccer moms; etc

138

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

Licensing Authorities' Options for Managing Older Driver Safety--Practical Advice from the Researchers

James Langford, Monash University Accident Research Center, presiding

Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; and Safe Mobility of Older Persons Committee

The last decade or so has seen a substantial advance in research findings relating to the assessment and management of older driver safety. Despite these activities, many licensing authorities continue to implement the same procedures that have been in place for many years – at least some of which have been contradicted by the research. This occasional reluctance to respond to the latest knowledge can be attributed, at least in part, to the lack of clear messages



86th Annual Meeting

Workshop Information

from researchers. There is an urgent need for clearer communication from the research community to licensing authorities – specifically to provide practical advice about the assessment and management of older driver safety, based on the growing body of research knowledge

139

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

Looking Backward – Thinking Backward: Hindsight Judgment of Human Error in Accident Investigation

Michael Dilich, Foresight Reconstruction, Inc.; Neal J. Roesse, University of Illinois, Urbana-Champaign, presiding

Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; and Safe Mobility of Older Persons Committee

Although the cause of most transportation accidents is attributed to human error, establishing what qualifies as an “error,” what errors constitute “unreasonable “ conduct and what causes errors to occur in the first place relies heavily on the investigator’s expert judgment. Accident investigators have a public duty to objectively determine the causes of accidents, without judgmental bias, as a part of large societal concerns. Reliable identification and understanding of errors that cause accidents is clearly prerequisite to the fair attribution of fault and to the development of countermeasures for safer roads in the future. This workshop will address the hindsight bias, a powerful, natural, but not deliberate human judgmental bias that poisons the way we, as after accident observers, think about cause, fault and preventability. Along the way, related biases called counterfactual thinking and the actor/observer effect will also be addressed within the context of transportation accidents.

140

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

Perspectives and Best Practices for Human Systems Integration (HSI)

J. Robert Bost, Naval Sea Systems Command; Rajiv Khandpur, U.S. Coast Guard, presiding
Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; Safe Mobility of Older Persons Committee; and Railroad Operational Safety Task Force

“Human Systems Integration” (HSI) is the systematic approach of applying behavioral science principles to improving systems throughout their life cycle. This workshop session will explore best practices from both the military and commercial worlds. When, where, and how to best apply HSI to achieve successful transportation more often than not involves out-of-the-box thinking with innovation in training and career progression an integral part of the process. Brief presentations of case studies by session leaders and participants will review and stimulate discussion. The session will produce a prioritized list of best practices and ideas for applying human behavioral sciences effectively in transportation systems for improving safety, reliability, efficiency, quality of life, and effectiveness.



86th Annual Meeting Workshop Information

141

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

Proactive Risk Management Safety Approaches for Managing Human Factors Caused Accidents in the Railroad Industry: Alternatives to Compliance

Michael Coplen, Federal Railroad Administration; Thomas Raslear, Federal Railroad Administration; Joyce Ranney, Volpe National Transportation Systems Center, presiding
Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; Safe Mobility of Older Persons Committee; and Railroad Operational Safety Task Force

Despite the technological achievements in the rail industry over the years, and the significant improvements in safety as a result of those advances, human factors caused accidents have remained relatively stable, accounting for approximately 38% of train accidents and now represents the leading cause of train accidents. Traditional safety approaches for managing these human factors caused accidents typically emphasize rules compliance, regulatory oversight, accident investigations, or systematic monitoring of accident and injury data. Unfortunately, these approaches are reactive in nature, often involving disciplinary and punitive responses as a consequence to an accident after it has occurred resulting in the suppression of information that could lead to a better understanding of why an accident occurred. Recently, the railroad industry has been embracing more proactive and preventative safety approaches as a means to address human factors caused accidents. This workshop will discuss innovative proactive risk management initiatives currently underway in the railroad industry, such as the Close Calls Confidential Reporting System, behavior-based accident prevention methods, the development of leading indicators, and fatigue risk management systems in the context of traditional reactive approaches. The workshop will focus on the common elements of proactive risk management and continuous improvement processes, why these approaches are important, and how they fit in the context of a regulatory environment.

142

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

Reducing Impacts of Aggressive Driving on Pedestrians, Bicyclists, and Drivers

Gihon Jordan, Consultant in Transportation; J Peter Kissinger, AAA Foundation for Traffic Safety, presiding
Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; and Safe Mobility of Older Persons Committee

This interactive workshop will focus on defining and understanding effective countermeasures against Aggressive Driving and its impacts not only on drivers, but also on the pedestrians and bicyclists. Speakers will address such topics as behavioral psychology, advertising and the media, traffic law enforcement, training, technology, peer pressure and advocacy. Participants will gain and offer insights through a balance of presentations and brainstorming, Q&A, and discussion. We will discuss relationships among



86th Annual Meeting Workshop Information

illegal, aggressive, reckless, distracted and bad driving and the lack of enforcement, respect for peds and responsible advertising.

143

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

Teen Driving: Simulation, Other Technologies and Knowledge Advancements for Training Novice Drivers

Daniel V. McGehee, University of Iowa; Loren Staplin, TransAnalytics, LCC; Donald L Fisher, University of Massachusetts - Amherst, presiding

Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; and Safe Mobility of Older Persons Committee

Training novice drivers, particularly in the context of graduated driver licensing, continues to attract attention as one of a portfolio of methods to reduce teen driving crashes. This session will explore uses of technologies such as simulation, vehicle monitoring devices, and crash avoidance technology as possible new tools in driver training. New insights into adolescent brain, cognitive and affective development will be discussed to determine how these in concert with the new technologies could shape new training regimes. Extensive group interaction and participation is planned to formulate new ideas and directions.

144

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

The Human Factors of Commercial Driving

Ronald R. Knipling, Consultant, presiding

Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; and Safe Mobility of Older Persons Committee

There are many human factors differences between commercial and non-commercial driving. These include differences in the driving task itself (and associated safety hazards), interactions with other traffic, driving patterns (i.e., long-haul vs. commuting and other general driving), driver characteristics (behavioral and medical), and macroergonomics (i.e., the operational milieu, motivations, regulatory structure, etc.). This workshop will attempt to identify and articulate both the similarities between commercial and non-commercial driving as well as the many differences.



86th Annual Meeting Workshop Information

145

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

There Goes the Sun: Driver Vision and Behavior During Dusk and Darkness"

John D. Bullough, Rensselaer Polytechnic Institute; James R. Sayer, University of Michigan Transportation Research Institute; David M. Burns, 3M Company, presiding

Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; and Safe Mobility of Older Persons Committee

In this session both night and twilight visual performance and system improvements to enhance visibility and driver performance will be discussed. Typical topics to be covered include: adaptation of rod and cone systems; peripheral and foveal visual performance and the driving task; and impact of light spectrum on peripheral visual performance at mesopic light levels. The effects of age on different visual capabilities, particularly in mesopic or twilight conditions will also be considered. As part of the workshop participants will work in small teams to propose testable hypotheses and experimental methods to determine the relative importance of different illumination types and methods on the visual system's function during nighttime conditions, and discuss potential new approaches to nighttime and mesopic illumination that more effectively addresses drivers' visual requirements.

146

Sunday, January 21, 2007, 9:00 a.m.-5:00 p.m., Marriott

Work Zone Safety and ITS Countermeasures

John Michael Sullivan, University of Michigan Transportation Research Institute; Gerald L. Ullman, Texas Transportation Institute, presiding

Sponsored by Vehicle User Characteristics Committee; User Information Systems Committee; Simulation and Measurement of Vehicle and Operator Performance Committee; Visibility Committee; Alcohol, Other Drugs, and Transportation Committee; and Safe Mobility of Older Persons Committee

This session will explore the use of information technology systems and other ITS technologies in work zones and incident areas. For example, intelligent portable traffic management systems, variable speed limit and automated speed enforcement in work zones will be discussed. Applications, problems and successes with these and other innovative technologies will be shared.

Sunday, January 21, 2007, Noon-1:30 p.m., Marriott

Human Factors Workshop Lunch

Suzanne E. Lee, Virginia Tech Transportation Institute, presiding

Sponsored by Vehicle User Characteristics Committee



86th Annual Meeting Workshop Information

147

Sunday, January 21, 2007, 1:30 p.m.-2:30 p.m., Marriott

Presentations That Won't Leave Your Audience in the Dark!

Sponsored by Technical Activities Council

Learn speaking tips, techniques for preparing high-quality presentations, and on-site troubleshooting techniques from Patricia Lees of Nichols Consulting Engineers. All Annual Meeting attendees are welcome.

148

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Marriott

AASHTO/NSBA Steel Bridge Collaboration Guide Specifications and Guidelines: Consensus Standards for Steel Bridge Design and Construction

William McEleney, National Steel Bridge Alliance, presiding

Sponsored by Fabrication and Inspection of Metal Structures Committee

This workshop will provide guidance for economical steel bridge design and construction through introduction and overview of standards developed by the AASHTO/NSBA Steel Bridge Collaboration. The Collaboration is a joint effort between the American Association of State Highway and Transportation Officials (AASHTO) and the National Steel Bridge Alliance (NSBA) with representatives from state Departments of Transportation, the Federal Highway Administration, academia, and the various industries related to steel bridge design, fabrication, inspection, and erection. The Collaboration achieves quality and value in steel bridges by development and implementation of consensus standards for economic and effective design, detailing, inspection, fabrication, and erection of steel bridges.

149

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Marriott

Building Quality Hot-Mix Asphalt Longitudinal Joints: Point/Counterpoint

Carlos E. Rosenberger, Asphalt Institute; Dean A. Maurer, Pennsylvania Department of Transportation, presiding

Sponsored by General Issues in Asphalt Technology Committee

The proper way to place and construct the longitudinal joint is included in every hot-mix asphalt (HMA) training program and has been the subject of numerous research studies. Despite all those efforts the longitudinal joint continues to be identified as the area of the pavement most likely to show signs of early distress, resulting in the premature failure of hot mix asphalt pavements. Paving experts have differing views on the proper way to construct and compact longitudinal joints. Some agencies have a joint density specification; others choose to go with a method specification. Superpave was initiated with the idea that getting an HMA pavement to last just a bit longer would reap enormous economic returns; the ability to construct a longitudinal joint that performs like the rest of the mat may offer an even greater benefit. This workshop is intended to raise the bar for longitudinal joints by:

- presenting the differing views on constructing / placing the longitudinal joint



86th Annual Meeting

Workshop Information

- investigating the need for / lack of a joint density specification.
- discussing related activities that may improve joint performance, ie, painting the joint, etc.
- concluding with an open panel discussion

150

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Marriott

Innovation in Air Traffic Flow Management

Banavar Sridhar, NASA Ames Research Center, presiding

Sponsored by Airfield and Airspace Capacity and Delay Committee

This workshop will serve as both a primer on air traffic flow management (TFM) for the uninitiated and a forum for researchers and practitioners to exchange knowledge and ideas. The current systems for TFM in the US will be overviewed, with particular emphasis on recent innovations (such as slot credit substitution and flow constrained areas) and near-term and long-term opportunities for further improvement. Methods for assessing the performance TFM systems (including both equity and efficiency) will be presented and applied to assess recent performance trends. Finally, we will examine the remarkably fast pace of innovation in TFM and look for the factors that make this possible.

151

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Marriott

Integrated Materials and Construction Practices for Durable Concrete Pavements

James D. Grove, Center for Portland Cement Concrete Pavement Technology, presiding

Sponsored by Portland Cement Concrete Pavement Construction Committee; Durability of Concrete Committee; and Concrete Materials and Placement Techniques Committee

This workshop highlights the new Integrated Materials and Construction Practice (IMCP) manual which provides a ready reference and/or instruction guide for anyone involved in designing or constructing concrete pavements. The primary emphasis is on concrete as a material, specifically on optimizing concrete's performance. The key to optimizing concrete performance is to consider it as the central component of a complex, integrated pavement system.

152

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Marriott

Reliability in the Mechanistic-Empirical Pavement Design Guide

Glen E. Miller, Iowa DOT; Edel R. Cortez, U.S. Army Engineer Research and Development Center; Maureen A. Kestler, USDA Forest Service, presiding

Sponsored by Modeling Techniques in Geomechanics Committee

Each of the parameters involved in pavement design, construction and field performance carries a measure of variability and uncertainty. Sources of variability must be identified and quantified to assess the reliability of pavement designs, to define acceptable construction tolerances, and to adequately interpret the performance of pavements subjected to traffic and environmental effects. The NCHRP 1-37A Mechanistic-Empirical Pavement Design Guide incorporates the reliability



86th Annual Meeting

Workshop Information

concept at several stages in the design process. This workshop will address issues related to the implementation of the reliability concept in the new mechanistic-empirical guide. The workshop topics will include data variability on material properties, subgrade characteristics, construction quality control methods, traffic, climate, performance prediction models, and field performance evaluations.

153

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Marriott

South African Highway Technology and Practice

Kim Jenkins, University of Stellenbosch, South Africa, presiding

Sponsored by International Activities Committee; Low-Volume Roads Committee; Transportation Education and Training Committee; and Pavement Management Section

Since the 1970s, South Africa has been at the forefront of highway and transportation research and has a well-established national and provincial research and implementation program. These advances were not widely disseminated outside of the country until the 1990s, when the Federal Highway Administration and the California Department of Transportation began publicizing and implementing South African technologies in the United States.

This workshop showcases some of the latest South African developments in areas including accelerated testing, ultrathin friction courses, cold-mix asphalt mixtures, pavement design protocols, seal design technologies, stabilization technology, experiences with ultrathin reinforced concrete wearing courses, routine road maintenance developments aimed at developing new contractors, and public-private partnerships. This workshop is designed with a wide range of audiences in mind, including highway and transportation agencies, highway contractors and consultants, and academia.

154

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Marriott

Understanding Modern Survey and Mapping Tools: A Workshop for Geospatial Data Users

Curtis A. Clabaugh, Wyoming Department of Transportation; David B Zilkoski, National Geodetic Survey, presiding

Sponsored by Geospatial Data Acquisition Technologies in Design and Construction Committee

Modern survey and mapping tools such as GPS and GIS provide simple interfaces which belie the complexity of the models and algorithms used within. Error in the content or application of these tools can distort the data derived from the survey for position and elevation in a variety of ways. This workshop provides a management overview of the geodetic concepts applicable to modern positioning and describes how to properly use new models, tools, and survey infrastructure, with an aim to show developers and users how to use their black boxes with competence and confidence.



86th Annual Meeting Workshop Information

155

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Marriott

Using Information Technologies to Support Better Construction Management III

C. Douglass Couto, Michigan Department of Information Technology; Trefor P. Williams, Rutgers University; Paul M. Goodrum, University of Kentucky, presiding

Sponsored by Information Systems and Technology Committee and Construction Management Committee

This half-day workshop examines emerging technologies and technology tools that can improve management of construction projects. Workshop participants will be asked to generate a list of research topics.

156

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Shoreham

Asset Management for Ports

Thomas H. Wakeman, Port Authority of New York and New Jersey, presiding

Sponsored by Marine Environmental Committee; Ports and Channels Committee; Inland Water Transportation Committee; and Transportation Asset Management Committee

The workshop consists of two parts. The first panel presents the current state of affairs and conceptual framework for port asset management, available economic models, strategic planning issues, and a port representative. The second panel will develop into a working and discussion session to explore the opportunities and challenges for ports to evolve (for example, can asset management be expanded to deal with environment, security, and capital investments among other needs) and apply the asset management tools to ports, intermodal transportation infrastructure, and international cargo delivery practices. The workshop goal is to define specific tasks and individuals who would develop papers or presentations for the TRB 2007 Asset Management Conference, to be held in New Orleans in November 2007.

157

Sunday, January 21, 2007, 1:30 p.m.-5:30 p.m., Shoreham

Bridge and Tunnel Security

Mary Lou Ralls, Ralls Newman, LLC; Jeffrey L. Western, Wisconsin Department of Transportation, presiding

Sponsored by Critical Transportation Infrastructure Protection Committee and Structures Section

The events of September 11, 2001, revealed that the nation's transportation infrastructure has vulnerabilities. Shortly after 9/11, the American Association of State Highway and Transportation Officials (AASHTO) in cooperation with the Federal Highway Administration (FHWA) created the AASHTO Task Force on Transportation Security. Significant research has been conducted under TRB's Cooperative Research Program in cooperation with AASHTO and FHWA, and several transportation security pooled-fund projects are in progress. The AASHTO Special Committee on Transportation Security, FHWA, Transportation Security Administration (TSA), and TRB continue to address bridge and tunnel security issues at the national level. This workshop provides an update on activities in the past year as well as a discussion by state representatives on their



86th Annual Meeting

Workshop Information

successes, difficulties, and lessons learned from their bridge and tunnel security efforts. The intended audience of this workshop are those interested in protecting the nation's bridge and tunnel infrastructure, including state bridge engineers, consultants, academia, and industry partners.

158

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Shoreham

Context Sensitive Design/Context Sensitive Solutions (CSD/CSS) and Educational Voids

Nikiforos Stamatiadis, University of Kentucky, presiding

Sponsored by Geometric Design Committee; Operational Effects of Geometrics Committee; and Context Sensitive Design/Solutions (CSD/CSS) Task Force

Over the past decade significant steps have been taken to increase the wider use and acceptance of Context Sensitive Design and Solutions (CSD/S) in the US. To further promote these concepts, several training and educational efforts have been undertaken and a large number of transportation professionals have been through that training.

There is however an area where little effort has been placed which is the academia. It is believed that for the CSD/S to root itself and become the mode of daily operation in the future, a culture change is essential that will start from the education of future practitioners, especially civil engineers, landscape architects, and planners. A starting point for determining future needs and action items is identifying the existing voids. Once these voids are defined, then solutions could be developed to address them. The objective of this workshop will be to begin an identification of the current status of CSD/S education in universities and determine the potential voids that need to be addressed.

159

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Shoreham

National Incident Management System Training

Yuko J. Nakanishi, Nakanishi Research and Consulting; Albert Samano III, Vanasse Hangen Brustlin Inc, presiding

Sponsored by Critical Transportation Infrastructure Protection Committee; Transportation Education and Training Committee; Freeway Operations Committee; Military Transportation Committee; and Intelligent Transportation Systems Committee

Studies have found that response problems to emergencies and major incidents often emanate from inadequate management. On February 28, 2003, Homeland Security Presidential Directive-5 directed the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS) to address this issue. NIMS is a nationwide template that enables all government, private-sector, and nongovernmental organizations to work together during domestic incidents. The first phase of the workshop presents National Incident Management System (NIMS) training. The second portion of the workshop builds on the NIMS concepts presented in the first part and shows how Traffic Management Centers (TMCs) can serve as an active part of the Incident Command System (ICS) and support the Incident Commander (IC) during an incident or emergency occurring on the TMC's roadway. The second portion also



86th Annual Meeting

Workshop Information

outlines the manner in which a concept of operations can be developed for TMCs that effectively integrates their response actions with the emergency response activities being performed by public safety agencies at the scene. Many TMCs do not fully realize the powerful effect they can have by assisting the IC in the response and management of an incident. In addition, TMCs may not fully understand their responsibilities under Emergency Support Function-1 Transportation.

160

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Shoreham

Load Resistance Factor Design (LRFD) of Skewed and Curved I and Box Girder Bridges

Firas Sheikh Ibrahim, Federal Highway Administration; Thomas Saad, Federal Highway Administration, presiding

Sponsored by Steel Bridges Committee

This workshop will discuss the latest developments in the AASHTO LRFD Bridge Design Specifications related to the design of straight and curved steel I and box – bridge girders. The workshop will illustrate the application of the recently adopted specifications through four recently developed bridge design examples, including skewed, straight and curved, I and box girder bridges.

161

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Shoreham

Measuring the Economic Significance of Aviation

Charles R. Chambers, Jr., Airports Council International - North America, presiding

Sponsored by Aviation System Planning Committee and Aviation Economics and Forecasting Committee

Aviation forms an essential component of modern life. From the ever growing volume of air travel to the increasing use of air freight to move high value, time-sensitive or perishable commodities, it is clear that the air transportation system plays a critical role in the economy of the 21st century. Therefore it is not surprising that many airport authorities and other agencies responsible for aviation planning and development have undertaken studies to measure the economic impact of the aviation activities at the facilities they operate or are responsible for planning, and that a fairly standard approach to such studies has evolved. Unfortunately, this approach often confuses costs with benefits and provides little guidance on how different planning or investment decisions would change the contribution of the aviation system to economic growth, either in the aggregate or as it affects different stakeholders or communities. Therefore these studies, while commonly predicting that the contribution of the aviation system to a region's economy is impressively large, typically provide very little help in making the difficult planning decisions that arise in developing the aviation system to meet future needs. This workshop will take a critical look at the current approaches to measuring the economic impact of the aviation system and examine how well they address the key issues and planning challenges that will have to be faced in the future. It will explore how economic impact assessment methodology can be improved in order to make the results more credible and more useful to decision-makers, and will address the associated research needs and data requirements to better understand the contribution of aviation to changes in economic activity, from both an aggregate and disaggregate perspective.



86th Annual Meeting Workshop Information

162

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Shoreham

Simulation Practices, Needs, and Challenges for Corridor Management

Sponsored by Traffic Flow Theory and Characteristics Committee; Highway Capacity and Quality of Service Committee; Freeway Operations Committee; and Traffic Signal Systems Committee

As agencies realize the importance of operating their facilities to make the most of their existing capacity, there has been an increasing interest in the concept of managing multiple transportation facilities as an integrated corridor. Simulation modeling plays a key component in the planning and design of corridor management strategies and plans. There are many challenges in using simulation for a multi-modal, multi-roadway corridor that implements various ITS devices and strategies. This workshop highlights and discusses the current practice, case studies, international experiences, research needs, and various challenges of simulating corridor management applications.

163

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Benchmarking for Data Stewardship in Asset Management

Jack R. Stickel, Alaska Department of Transportation and Public Facilities, presiding

Sponsored by Statewide Transportation Data and Information Systems Committee; Information Systems and Technology Committee; and Transportation Asset Management Committee

Effective management of enterprise data is the cornerstone for any optimized decision making related to asset management. During the 2006 TRB Annual Meeting, the workshop Data Stewardship: Meeting the Challenges of Enterprise Data Management demonstrated the technical elements of data stewardship and helped to identify the major challenges. The current workshop will build on that work and focus on the best practices in managing data stewardship. The workshop includes benchmarking best practices from other industries and a synthesis of initiatives and findings from other industries related to data stewardship. Relating the lessons learned, pitfalls, and best practices that can be implemented into the transportation domain will be explored.

164

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

New Wave of Travel Demand Modeling and Simulation, Part 2: Bringing Activity-Based Models to Maturity (Part 1, Session 116)

Konstadinos G. Goulias, University of California, Santa Barbara, presiding

Sponsored by Moving Activity-Based Approaches To Practice Task Force; Traveler Behavior and Values Committee; and Transportation Demand Forecasting Committee

This workshop identifies paths that are under way worldwide to bring activity-based models to maturity, fill gaps, and advance the state of the practice. Lessons learned in developing activity-based approaches and land use-transportation integrated models are also provided. Emphasis is given to applications and field experience.



86th Annual Meeting

Workshop Information

165

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Community, History and Highways: Context Sensitive Design and Historic Preservation

Amy Squitieri, Mead & Hunt, presiding

Sponsored by Historic and Archeological Preservation in Transportation Committee and Context Sensitive Design/Solutions (CSD/CSS) Task Force

This workshop is designed for practitioners challenged with fulfilling the requirements of historic preservation and environmental law, and applying a Context Sensitive Solutions (CSS) approach to transportation projects. The goal of the workshop is to provide participants with additional tools that will help them integrate CSS into their work on both a project specific and programmatic basis. CSS is broadly defined as an inclusive approach that integrates scenic, aesthetic, historic, environmental and community values with transportation needs during the project development process. Meaningful and early collaboration among the public, project stakeholders, project sponsors and their multidisciplinary design teams, and reviewing agencies is the key to a successful context sensitive approach. Representatives from FHWA, state transportation agencies, and consultant firms nationwide will provide an overview of current initiatives in CSS, discuss multiple case studies involving historic properties, and demonstrate how CSS can be effective at the programmatic level. Workshop participants will have the opportunity to engage in collaborative discussions designed to evaluate the effectiveness of the CSS approach used in the case studies, and identify additional tools and opportunities to enhance the process.

166

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Critical Issues in Transportation: How Can AI and Advanced Computation Help?

Shinya Kikuchi, Virginia Polytechnic Institute and State University, presiding

Sponsored by Artificial Intelligence and Advanced Computing Applications Committee

In 2006, TRB identified nine critical transportation issues facing the United States: congestion, emergencies, energy and environment, equity, finance, human and intellectual capital, infrastructure, institutions, and safety. Artificial intelligence (AI) and advanced computation techniques can play a significant role in understanding the causal relationships, modeling the complex problems, and extracting new knowledge based on the available data. For example, over the years, massive amounts of data have been accumulated on accidents, traffic operations, or infrastructure conditions, yet it has not been possible to transform these data into suitable information on which decisions can be made. In other instances, the data in natural language format (for example, in the equity and institutions areas) were dismissed as unfit for computation and modeling and hence treated as less than useful for decision making and knowledge building. However, proper AI and computation techniques can now be used in these domains to address issues related to knowledge extraction and modeling. AI allows handling of descriptive, approximate, and subjective data and can help in extracting knowledge embedded in databases that otherwise were undiscoverable using traditional search and modeling approaches. These exciting developments point to a potentially useful role that AI can play in shaping the future of transportation. This workshop continues the tradition of the successful TRB Sunday afternoon workshop series sponsored by the AI and Advanced Computations Committee. World-renowned scholars will speak both on the critical issues and the means to address them through use or



86th Annual Meeting

Workshop Information

integration of AI and advanced computation techniques.

167

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Doctoral Student Research in Transportation Modeling

David J. Lovell, University of Maryland, College Park, presiding

Sponsored by Transportation Network Modeling Committee; Traffic Flow Theory and Characteristics Committee; Traveler Behavior and Values Committee; and Transportation Demand Forecasting Committee

This half-day seminar consists of reports of Ph.D. student research on transportation modeling and travel behavior. Reports of recently completed or nearly completed Ph.D. dissertations and research in progress are featured.

168

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Integrating Demand and Supply Travel Models

Thomas F. Rossi, Cambridge Systematics, Inc., presiding

Sponsored by Transportation Demand Forecasting Committee; Traveler Behavior and Values Committee; and Transportation Network Modeling Committee

In research and practice, there have been many advances on both travel demand and supply side modeling, but there has been less attention to the integration of these advanced models. Current integration techniques (i.e., loose coupling of these models to transfer data from one to the other) do not take advantage of the added behavioral data available in each model nor do they achieve consistency among parameters that are used in both demand and supply models. The proposed workshop is to explore the various different levels of integration that are possible for demand and supply travel models: incorporating specific features of demand modeling into supply side modeling, such as path-building parameters; incorporating specific features of supply modeling into demand side modeling, such as value of time parameters for different market segments (i.e., truck trips, work trips, by income group, etc.) into demand model components, such as trip distribution and time of day; incorporating specific features of activity-based simulation modeling in advanced travel simulation models, such as dynamic traffic assignment, route choice or traffic microsimulation models, and vice versa; and integrating demand and supply travel models to take advantage of behavioral details of each person and each vehicle developed in the demand model for use in refining the supply model (e.g., value of time for each person could be used in assigning trips to toll roads in the traffic operation or route choice model).

169

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

International Standards for GIS and ITS

Tschangho John Kim, University of Illinois, Urbana-Champaign, presiding

Sponsored by Geographic Information Science and Applications Committee

An informative session on the recent development of International Standards for both GIS and



86th Annual Meeting Workshop Information

ITS. Sample agenda (speakers are suggested but not confirmed):

Asked for more complete description 6/14/06

1. Hour 1: International Standards for ITS and GIS: Why, What and How are they being developed? By Dr. Tschangho John Kim, Co-Chair of the Joint Task Force for ISO/TC 204 (ITS Standards Committee) and ISO/TC 211 (GIS Standards Committee)
2. Hour 2: International Standards for ITS: Adopted Standards and Emerging Issues, by Dr. Scarponcini, Secretary, WG 3 (ITS Database technology), ISO/TC 204
3. Hour 3: International Standards for GIS: Adopted Standards and Emerging Issues, by Dr. Charles Roswell, Project Leader, Moving Features, ISO/TC 211
4. Hour 4: OGC Standards for GIS: Adopted Standards and Emerging Issues, by Dr. George Percival, Executive Director, Interoperability Architecture, OGC
5. Open Discussion

170

Sunday, January 21, 2007, 8:30 a.m.-noon, Hilton

Knowledge Management: Meeting Organizations' Every Changing Demand

Maureen L. Hammer, Virginia Department of Transportation, presiding

Sponsored by Management and Productivity Committee; Technology Transfer Committee; Library and Information Science for Transportation Committee; Maintenance and Operations Personnel Committee; and Conduct of Research Committee

This workshop introduces the topic of knowledge management and describes its evolution from record management and information management to its current use as a powerful tool that is important to every transportation agency. The current state of the practice presented will include case studies from states, the federal government, and key findings of an NCHRP synthesis study on this topic. The workshop concludes with a panel of senior officials who will discuss implementation issues, opportunities, and challenges.

171

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Planning for the Green and the Grey: How Green Infrastructure Plans Can Help Advance Transportation Projects

Kris A. Hoellen, Conservation Leadership Network The Conservation Fund; Dominique Lueckenhoff, US Environmental Protection Agency, presiding

Sponsored by Environmental Analysis in Transportation Committee and Ecology and Transportation Committee

This workshop will demonstrate how green infrastructure planning can be an effective tool for transportation professionals in planning and delivering transportation projects. Green infrastructure planning provides transportation professionals with a strategic approach for prioritizing conservation opportunities and a planning framework for conservation and development – integrating the green and the grey. Participants at the workshop will learn how green infrastructure planning can serve as a tool to inform land use decisions and build consensus among diverse interests. Through case studies and a mapping charrette, participants will come to see how a green infrastructure approach can be used to connect environmental,



86th Annual Meeting Workshop Information

social, and economic health across urban, suburban, and rural settings, and most importantly serve to address planning provisions in Section 6001 of SAFETEA-LU and link the planning and NEPA process. Participants will also hear how this approach is being adopted by a number of agencies including the US Fish and Wildlife Service, the Department of Defense, and the Environmental Protection Agency, and will hear strategies for advancing environmental mitigation into early regional transportation planning.

172

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Road Safety in Developing Countries

Anthony Bliss, World Bank, presiding

Sponsored by International Activities Committee and Transportation in the Developing Countries Committee

This workshop is designed for both practitioners and researchers with an interest in contemporary issues concerning road safety in low- and middle-income countries. Its principal focus is on activities responding to the recommendations of the World Report on Road Traffic Injury Prevention launched by the World Health Organization and the World Bank in 2004 and related United Nations and World Health Assembly Resolutions. The workshop places a strong emphasis on innovative safety engineering, safety economics, injury prevention, and the design of multisectoral projects aimed at building country capacity and achieving measurable results.

173

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Innovative Doctoral Transportation Research by Eisenhower Graduate Fellowship Recipients

Gwen Sutton, Federal Highway Administration, presiding

Sponsored by Planning and Environment Group; Research and Education Section; Transportation Education and Training Committee; and Technology Transfer Committee

This workshop features innovative research by second- and third-year Ph.D. Eisenhower Graduate Fellowship recipients on a broad array of significant transportation topics including congestion management, infrastructure investment, safety, commercial vehicle security, and technology transfer.

174

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Out of the Rubble: Transportation and Land Use Community Resilience and Recovery

Carol A. Lewis, Texas Southern University, presiding

Sponsored by Transportation and Land Development Committee and Environmental Justice in Transportation Committee

The record hurricane season of 2005 included Katrina, Rita and Wilma. These hurricanes devastated New Orleans and caused significant damage to Mississippi, Louisiana, Texas and



86th Annual Meeting

Workshop Information

Florida. Experience gained from the events of 2005 provides an opportunity to examine lessons learned and appropriate directions for future policy and research, particularly as it relates to the issues of land use and evacuation in new communities and those that are rebuilding. These considerations are important not only for the Gulf Coast, but extend to communities across the nation in the face of manmade or natural disasters. Consideration may include design and institutional issues related to evacuation and shelter-in-place options, emergency preparedness, critical transportation facility planning, land use guidelines, implementation phasing, tradeoffs between rebuilding and redeployment for conservation and other more storm-resilient uses, equity consideration and economic development needs.

175

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Use of Technologies in Communicating

Bonnie A. Osif, Pennsylvania State University; James Self, Oklahoma State University, presiding
Sponsored by Transportation Education and Training Committee and Conduct of Research Committee

The workshop examines several technologies available to the transportation community for communication and training delivery. It focuses on the practical use of these technologies for seminars, workshops, teleconferences, video conferences, and distance learning as well as for archiving content for future online access. One presentation addresses training delivery modes including asynchronous web-based training (WBT), synchronous web-conference training (WCT), and blended solutions using both WBT and WCT components, along with an overview of the National Highway Institute (NHI) toolkit for developing WBT and other quality distance learning products. Another seeks to remove the mystery from blogs, podcasts, webcasts, and Wikis by explaining the role and appropriate use of each in training development. A third presentation discusses the significant investment in electronic training delivery and knowledge-sharing platforms made by the Federal Highway Administration (FHWA) over the past 5 years. This workshop presents FHWA's adoption story, including starts and stops, challenges and successes, and best-in-industry strategies for managing change and realizing a return on investment in knowledge-sharing tools. A fourth presentation concerns a case study of the use of Multimedia Breeze as a means for distance learning delivery and teleconferencing in the Tribal Transportation community.

176

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Tools for Transportation Research

Sandra L. Tucker, Texas A&M University, presiding
Sponsored by Library and Information Science for Transportation Committee

Become a power searcher of the new TRIS Online. Learn to use other valuable research tools such as the Transportation Libraries Catalog, TRB's Research in Progress, and the Transportation Research Thesaurus. Handouts with specific examples will be provided.



86th Annual Meeting

Workshop Information

177

Sunday, January 21, 2007, 1:30 p.m.-5:00 p.m., Hilton

Transportation Issues for Elderly and Disabled Persons

Christopher G. B. Mitchell, Consultant, United Kingdom, presiding

Sponsored by Accessible Transportation and Mobility Committee and Paratransit Committee

This workshop presents the results of recent studies on the mobility of elderly and disabled people in the United States and Europe. Information to be presented tentatively includes the results of a survey of the mobility of Americans with disabilities, effects of the aging population on future U.S. transit ridership, work by the European Conference of Ministers of Transport (ECMT) on the prevalence of disability and the implications for mobility, a study of demographic changes in Europe that have implications for transit operators, and guidelines for the accessibility of bus rapid transit for developed countries.

178

Sunday, January 21, 2007, 1:30 p.m.-5:30 p.m., Marriott

Design and Behavior of Steel Bridges Strengthened with Fiber-Reinforced Polymer (FRP) Materials

Sami H. Rizkalla, North Carolina State University, presiding

Sponsored by Structural Fiber Reinforced Plastics Committee

The workshop will cover the design and installation of Fiber-Reinforced Polymers (FRP) systems for strengthening and repair of steel bridges. Topics will include, design guidelines, installation recommendations, detailing requirements and environmental durability. Worked design examples will be used to illustrate the practical application of the proposed design procedures. Special applications, including repair of fatigue damaged steel girders and strengthening of steel columns, will also be presented. The practical international experience in this area will be demonstrated through a number of field applications from North America, Europe and Asia. This workshop will bring together international experts in the field of composites and will provide engineers and practitioners with practical tools which can be used for the implementation of FRP materials for strengthening and repair of steel bridges.

179

Sunday, January 21, 2007, 4:00 p.m.-5:45 p.m., Marriott

So You Want to Be a Transportation Professional?

Wayne K. Kittelson, Kittelson & Associates Inc., presiding

Sponsored by Operations Section and Technical Activities Council

Aspiring transportation professionals have many possible career paths in front of them, and they can benefit greatly from the experience of others who have gone before them. The purpose of this workshop is to give undergraduate students, graduate students, and others who are thinking about entering the transportation field an opportunity to hear from and speak to professionals who currently work in the public, private, and academic sectors. Each speaker will describe the essential work and environmental characteristics associated with a particular career path, identify the key traits that employers typically look for in employees, and discuss key issues and characteristics that employees should look for in prospective employers. The workshop concludes



TRANSPORTATION RESEARCH BOARD

OF THE NATIONAL ACADEMIES

86th Annual Meeting

Workshop Information

with a period of open discussion in which the audience is invited to engage the speakers and other sector representatives in additional dialogue and discussion.