Schedule-At-A-Glance
(Subject to Change)

Sunday, June 26
8:00 a.m. – 7:00 p.m.
Committee Meetings
Registration
Envision Credential Workshop
Pre-Conference Event: TransportationCamp Texas
Short Course: Updates to 2010 Highway Capacity Manual (HCM)
Exhibitor Move-in

Welcome Reception in Exhibit Hall

Monday, June 27
8:00 a.m. – 5:30 p.m.
Registration
Continental Breakfast in Exhibit Hall
Exhibit Hall Open
Plenary Session
Networking Break & Poster Displays in Exhibit Hall
Plenary Session
Lunch & Poster Displays in Exhibit Hall
Concurrent Technical Sessions
Networking Break & Poster Displays in Exhibit Hall
Concurrent Technical Sessions

Tuesday, June 28
7:30 a.m. – 5:30 p.m.
Registration
Continental Breakfast & Poster Displays in Exhibit Hall
Exhibit Hall Open
Concurrent Technical Sessions
Networking Break & Poster Displays in Exhibit Hall
Concurrent Technical Sessions
Awards Lunch & Lecture
Concurrent Technical Sessions
Networking Break & Poster Displays in Exhibit Hall
Concurrent Technical Sessions
Exhibitor Move-out
Younger Member Session
Younger Member Social Hour

Wednesday, June 29
7:30 – 11:00 a.m.
Registration
Continental Breakfast
Concurrent Technical Sessions
Networking Break
Concurrent Technical Sessions
Technical Tours
Howdy y’all, welcome to Houston, Texas. On behalf of the Transportation and Development Institute (T&D) of the American Society of Civil Engineers (ASCE), it is our pleasure to welcome you to the ASCE International Conference on Transportation & Development 2016. The theme of this year’s conference is “Projects and Practices for Prosperity”. The International Conference on Transportation and Development (ICTD 2016) serves as a synergistic opportunity to bring together academics, consultants, government representatives, and contractors from around the world to discuss critical transportation needs and solutions.

The demand for infrastructure improvement helps drive investment and development decisions. As communities grow, the needs for transportation, utility delivery services, and sustainable development practices increase. Additionally, transportation professionals must address these needs while considering funding challenges, natural resource constraints, and environmental protection. During this week at ICTD, you will be able to explore new technologies and creative financing of capital investment to move people and goods safely, efficiently, and with minimal environmental impact.

The Conference Steering Committee has worked hard over the last two years to make ICTD 2016 the premier conference venue for transportation and development professionals. You will be attending sessions this week during ICTD that will showcase technologies that transportation and development professionals will be implementing in the near future. In addition to future transportation concepts, conference sessions include many case study presentations highlighting lessons learned during many large-scale transportation projects. This week’s program includes five concurrent technical tracks, two workshops, and three technical tours to enable you as an attendee to earn up to 24 professional development hours (PDHs) towards your Professional Engineering licensure.

In addition to participating in sessions under five technical tracks, you will have the opportunity to review poster displays. The ICTD begins on Monday with seven outstanding plenary speakers addressing topics of interest to the many specialties represented by conference attendees. Technical sessions begin on Monday afternoon and run through Wednesday morning. The sessions cover the various transportation and development modes related to design, rehabilitation, sustainability, construction, operation and emerging technologies. On Wednesday afternoon, you will have the option of choosing from three technical tours: George Bush Intercontinental Airport, the Transtar Traffic Operation Center, and the Uptown Management District.

So enjoy your week here at ICTD 2016 as an attendee, presenter, exhibitor, sponsor, or cooperating organization. On behalf of the conference Steering Committee, we look forward to meeting all y’all and giving you a Howdy welcome to Houston, TX at ICTD 2016.

**CO-CHAIRS**

Geoff Baskir, C.M., AICP, M.ASCE, General Engineer  
Ernie Heymsfield, Ph.D., P.E., F.ASCE, University of Arkansas

**STEERING COMMITTEE**

**CO-CHAIRS**

Geoff Baskir, C.M., AICP, M.ASCE, General Engineer  
Ernie Heymsfield, Ph.D., P.E., F.ASCE, University of Arkansas

**TECHNICAL EDITOR**

Kelvin C.P. Wang, Ph.D., P.E., M.ASCE, Oklahoma State University

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Jeffrey D. Borowiec, Ph.D., Texas A&M Transportation Institute (Roadways Track)  
Lenor M. Bromberg, P.E., M.ASCE, City of Roswell, Georgia (Development Track)  
Michael J. Loehr, P.E., M.ASCE, CH2M Hill (Rail and Transit Track)  
Zhanmin Zhang, Ph.D., A.M.ASCE, University of Texas at Austin (Cross-Cutting Themes Track)

**PAST CHAIRS**

Brian McKeehan, P.E., F.ASCE, Gresham, Smith, and Partners  
Bob Bryson, P.E., M.ASCE, Retired, City of Milwaukee

**ICTD EXECUTIVE COMMITTEE**

Imad L. Al-Qadi, Ph.D., P.E., Dist.M.ASCE, University of Illinois at Urbana-Champaign  
Marsha Anderson Bomar, M.ASCE, FITE, AICP, ENV SP, Gwinnett Village Community Improvement District  
D. Wayne Klotz, P.E., D.WRE, Pres.09. ASCE, ENV SP, Klotz Associates  
C. Michael Walton, Ph.D., P.E., Dist.M.ASCE, University of Texas at Austin  
Wanning Zhai, Ph.D., Southwest Jiaotong University, China; Member, Chinese Academy of Sciences

Visit [www.asce-ictd.org](http://www.asce-ictd.org)
Envision Credential Workshop
9:00 a.m. – 4:30 p.m., Regent Salon

Envision provides a holistic framework for planning, evaluating and rating the community, environmental, and economic benefits of all types and sizes of infrastructure projects. It provides specific metrics to allow the evaluation, grading, and development of recognition for infrastructure projects. It encourages transformational, collaborative approaches and assesses the sustainability indicators over the course of the project’s life cycle. T&DI is hosting a full-day workshop that will equip participants to take the Envision Sustainability Professional (ENV SP) accreditation exam. The workshop will include a mix of presentations, case studies, and group exercises delivered by an ISI-approved trainer. Participants will learn how to use the Envision rating system to aid in sustainable planning and design.

Instructor: Marsha Anderson Bomar, M.ASCE, FITE, AICP, ENV SP, Executive Director, Gwinnett Village Community Improvement District

Marsha Anderson Bomar is the executive director of Gwinnett Village Community Improvement District. She brings 40 years of leadership in transportation and community development and is a certified planner and Envision™ certified sustainability professional. Bomar was the first female international president of the Institute of Transportation Engineers, served as president of the Transportation and Development Institute of the American Society of Civil Engineers and is vice chair of the Committee on Critical Infrastructure. She is passionate about the relationship between transportation and land use; her experience in many modes including truck, rail, transit, bicycling, walking and general transportation give her a broad perspective on options for moving people and goods. She also chairs a Transportation Research Board committee on Women’s Issues in Transportation and is author of the Urban Travel Characteristics chapter of the Transportation Planners Handbook.

Bomar is a frequent speaker on the national level on sustainability and resiliency of infrastructure and communities. She recently completed the Livable Centers Plan for the Six Flags Community (GA) to create a roadmap for the sustainable revitalization of a once vibrant area.

PDHs earned: 6

Registration Fee:

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<th>Sector</th>
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Short Course:
Updates to 2010 Highway Capacity Manual (HCM)
1:00 – 5:00 p.m., Windsor Salon

TRB recently released the most recent version of the Highway Capacity Manual, now referred to as Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis. This short course will provide an overview of the key changes and updates made since the HCM 2010 was published, including the addition of travel time reliability methods for urban streets and freeways, updated roundabout capacity models, the inclusion of an alternative intersection evaluation methodology, and expanded consideration of freight vehicles, and much more.

Instructor: Bastian Schroeder, Ph.D., Principal Engineer, Kittelson and Associates, Inc.

Bastian Schroeder is principal engineer with Kittelson and Associates, Inc. in Wilmington, NC. Schroeder has more than 10 years of professional experience focusing on research and technology transfer in transportation engineering. He has been centrally involved in the production of the 5th and 6th Editions of the HCM, with a primary focus on the freeway and interchange methodologies, as well as review and support roles for various interrupted flow chapters. He has served as principal investigator or Co-PI on over 22 funded projects, for sponsors including FHWA, NCHRP, SHRP2, ITE, NCDOT, and others. Schroeder has authored or co-authored more than 31 peer-reviewed journal articles, and 32 peer-reviewed conference proceedings, and has given numerous presentations at state, national, and international conferences. He is a member of the TRB Committee on Highway Capacity and Quality of Service, the TRB Committee on Roundabouts, the TRB Simulation Task Force, and chairs the North Carolina Simulation and Capacity Model users Group (SimCap) for ITE.

PDHs earned: 3.5

Registration Fee:
ONS: $195/$220 (Member/Non-Member)

Committee Meetings

Attend the semi-annual meetings of the following committees to learn more about their exciting activities.

Regency Ballroom G
8:00 a.m. – 5:00 p.m. Permeable Pavements Standard Committee

Regency Ballroom E
9:30 – 11:00 a.m. T&DI Freight and Logistics Committee (F&L)
11:00 a.m. – 12:30 p.m. T&DI Street and Highway Operations Committee (SHOC)
12:30 – 2:00 p.m. TRB Aircraft/Airport Compatibility Committee (AV070)
2:00 – 3:30 p.m. T&DI Highway Pavement Committee (HPC)
3:30 – 5:00 p.m. T&DI Airfield Pavement Committee (APC)

Projects and Practices for Prosperity
TransportationCamp Texas 2016, a partnership with the American Society of Civil Engineers and the Houston and Austin Chapters of the Young Professionals in Transportation (YPT), aims to bring together diverse views and perspectives on pressing transportation issues in Texas. By hosting TransportationCamp at ICTD, YPT, and ASCE are helping to create a unique TransportationCamp atmosphere, where technologists, transportation advocates, and users can come together in open conversation with the operators of Texas’ transportation providers.

What is an Unconference?
TransportationCamp Texas will be held as an unconference — a loosely structured conference emphasizing the informal exchange of information and ideas between participants, rather than following a conventionally structured program of events. Typically at an unconference, the agenda is created by the attendees at the beginning of the meeting. Anyone who wants to initiate a discussion on a topic can claim a time and a space. Unconferences typically feature open discussions rather than having a single speaker at the front of the room giving a talk, although any format is permitted. It is an exciting new way to engage in a group discussion, exchange great ideas, and learn from your peers.

TransportationCamp 2016 will begin in the Colonnade Salon B & Preassembly.

**Sunday, June 26**

**Welcome Reception**
6:00 – 7:30 p.m., Regency Ballroom ABCD
This is a great forum to network, mingle with friends and colleagues, and visit with exhibitors. Don’t miss the Welcome Reception and kick off your conference experience in a fun, relaxed environment. Included in Full Registration Packages.

**Additional Ticket Fee: ONS $75**

**Monday, June 27**

**Continental Breakfast**
8:00 – 8:30 a.m., Regency Ballroom ABCD
Sponsored by Lhoist North America

**Plenary Session**
8:30 – 10:15 a.m., Grand Salon & Preassembly

**Welcome Remarks**
Robert D. Stevens, Ph.D., P.E., F.ASCE, 2015 President, ASCE

**Keynote Address**

**Sylvester Turner, Mayor, City of Houston**

Sylvester Turner was elected Mayor of Houston on December 12, 2015, to serve a four year term beginning January 4, 2016. He was born and raised in the Acres Homes community in northwest Houston. Sylvester’s mother worked as a maid in the old Rice Hotel in Houston. His father was a painter for Continental Ensco and cut yards with his sons on the weekends to make extra money. The Turners raised nine children in their modest two-bedroom home. Sylvester lost his father to cancer when he was 13. Afterward, his mother took over the Turner household. Although she never finished high school or learned to drive, she ensured her children got an education and inspired them to achieve.

Sylvester attended neighborhood public schools until forced integration came to Houston, and he was bused to Klein High School. After a predictably rocky start, the student body adapted to its new enrollees. Sylvester was later elected student body president and graduated as valedictorian.

Sylvester graduated from the University of Houston and Harvard Law School before joining the law firm of Fulbright & Jaworski. He later founded the Houston law firm of Barnes & Turner in 1983. In 1988, Sylvester was elected to the Texas House of Representatives to serve the people of House District 139 in Northwest Houston. He served until his election as mayor, working on the House Appropriations Committee for 21 years and serving as Speaker Pro Tem for three terms. He was appointed to several Budget Conference Committees to help balance the state’s budget and served on the Legislative Budget Board.
Keynote Address: The Strategic Initiatives for Addressing the Mobility Needs of Texas

Marc D. Williams, P.E., Deputy Executive Director, Texas Department of Transportation (TxDOT)

Marc Williams serves as deputy executive director of the Texas Department of Transportation (TxDOT). In this role he supports the executive director with executive control and oversight of TxDOT operations and the management and operation of the state’s transportation system. These responsibilities include the development and administration of policies, programs and operating strategies for TxDOT. He is charged with ensuring Texas’ transportation system is constructed and maintained in the most cost-effective manner and address the state’s growing safety, mobility and reliability needs.

Williams’ career experience in transportation planning and program efforts includes public- and private-sector organizations involving state, county and local jurisdictions. He has served in leadership positions with two state departments of transportation and has worked with national, private-sector transportation engineering organizations. His professional assignments have included directing statewide transportation planning and programming efforts as well as managing project-specific highway and multimodal transportation plans and programs.

He has worked extensively with public and agency outreach, transportation plans of various modes, regional and corridor-level plans and programs, environmental planning and approval, economics and finance, project design and development, along with work in the areas of construction management, operations and maintenance.

Keynote Address: Technological Challenges in Rapid Development of High-Speed Railways in China

Wanming Zhai, Southwest Jiaotong University, Chinese National Academy of Sciences

Professor Wanming Zhai graduated from Southwest Jiaotong University with a B.S. degree in 1985 and received his Ph.D. in Railway Vehicle Engineering in 1992. He became a full professor in 1994. In 1999 he was appointed Chang Jiang Chair Professor by the Chinese Ministry of Education. Zhai was elected a member of the Chinese Academy of Sciences in 2011. Currently, he is the chairman of Academic Committee of Southwest Jiaotong University, the director of the Train and Track Research Institute, and the editor-in-chief of International Journal of Rail Transportation. He also serves as the president of Chengdu Association for Science and Technology, the vice president of the Chinese Society of Theoretical and Applied Mechanics, and the vice president of the Chinese Society for Vibration Engineering. Zhai developed a framework of vehicle-track coupled dynamics and a method for analyzing and assessing the running safety of high-speed trains passing through bridges based on train-track-bridge dynamic interactions, both of which have been widely cited and successfully applied to more than 20 large-scale field engineering projects for the railway network in China, mostly for high-speed railways.

Networking Break & Poster Displays
10:15 – 10:45 a.m., Regency Ballroom ABCD

Plenary Session
10:45 a.m. – 12:30 p.m., Grand Salon & Preassembly

Keynote Address:

Edward M. Emmett became Harris County Judge on March 6, 2007, presiding over a Board of Commissioners for the third most populous county in the United States. A member of the Texas House of Representatives from 1979 to 1987, Emmett was chairman of the Committee on Energy, a member of the Transportation Committee, and represented the state on numerous national committees relating to energy and transportation policy.

In 1989, President George H. W. Bush nominated Emmett as a commissioner at the Interstate Commerce Commission. After being confirmed unanimously by the U.S. Senate, Emmett served on the commission for three years. He has received international recognition for his work in transportation and logistics policy.

Among his many other activities, Emmett is director of Harris County’s Office of Homeland Security and Emergency Management, chairman of the Harris County Juvenile Board, and chairman of the Conference of Urban Counties Policy Committee. He graduated from Rice University in 1971 with a Bachelor of Arts in Economics and from the University of Texas at Austin in 1974 with a Master of Public Affairs.

Keynote Address: Envisioning the Future of Sustainable Development

Denise Nelson, P.E., ENV SP, LEED AP, Vice President, Institute of Sustainable Infrastructure

The future of development projects depends on the adoption of sustainable best practices that address the triple bottom line to result in the best return on investment and useful life. Guidance on best practices and metrics for tracking performance are being tested, and from the lessons learned on successful projects, we can envision the future of sustainable development.

Denise Nelson is the vice president for public education at the Institute for Sustainable Infrastructure. Her responsibilities include education and training for both public and private sector organizations and overall coordination of messaging and promotions related to Envision, the guidance and rating system for sustainable infrastructure that creates public confidence in the process of civil infrastructure development.

Nelson received her Bachelor of Science in Civil Engineering from Virginia Tech and her Master of Science in Environmental Engineering from the University of Cincinnati. She is a licensed engineer with more than 12 years of experience.
Keynote Address: State of the Houston Airports
Robert Barker, Chief Development Officer, Infrastructure, Houston Airport System

Robert Barker is the chief development officer of the Infrastructure Division for the Houston Airport System (HAS). He is responsible for overseeing the administration of planning, design, construction, and asset management contracts, managing long-term and short-term airport projects including the George Bush Intercontinental Airport Terminal Redevelopment Program (ITRP), analyzing operations and implementing best management practice policies and procedures to effectively manage the life cycle of infrastructure assets at HAS. A retired U.S. Navy engineering officer and certified facility manager, Barker has more than 20 years international airport development, infrastructure, and asset management experience.

Barker previously served as HAS deputy director for capital programs. Prior to that he was the executive representative for ITRP and the assistant director for asset management. He joined HAS in November 2012. His previous work assignments have included asset management leadership positions at Dallas-Fort Worth International Airport and the Cincinnati/Northern Kentucky International Airport, and in a variety of consulting engagements at Los Angeles International Airport, Indianapolis International Airport, Hartsfield-Jackson Atlanta International Airport, Northwest Florida Regional Airport and Phoenix Sky Harbor International Airport. During his Navy career, Barker served in a variety of positions, including as chief engineer aboard three Navy combatant ships.

Keynote Address: Update & Opportunity: Developing Texas Central’s High Speed Rail (HSR)
Shaun McCabe, Texas Central Railway

Texas Central will provide an update on its development of the first private HSR initiative. As the environmental clearance process moves closer to a decision, Texas Central will discuss those opportunities the project continues to work through in the development of this transformational project.

Shaun McCabe is an executive manager, attorney and environmental specialist with more than 25 years of experience in the energy and environmental sector. He has served as president and led a turnaround of a Texas-based materials management and disposal company, successfully advocated for changes to state legislation, obtained multi-state and federal agency approvals, licenses, and permits and led large capital expenditure environmental-related projects for Texas Central Railway.

Visit www.asce-ictd.org
**TUESDAY | JUNE 28**

**Continental Breakfast & Poster Displays**
8:00 – 8:30 a.m., Regency Ballroom ABCD

**Concurrent Technical Sessions**
8:30 – 10:00 a.m., See pages 11-15

**Networking Break & Poster Displays**
10:00 – 10:30 a.m., Regency Ballroom ABCD

**Concurrent Technical Sessions**
10:30 a.m. – 12:00 p.m., See pages 11-15

**Francis C. Turner Lecture and Awards Luncheon**
12:00 – 1:30 p.m., Grand Salon

**Welcome Remarks**
Lenor M. Bromberg, P.E., M.ASCE, T&D
President

Dallas N. Little, Ph.D., P.E.
Shiraz Tayabji, Ph.D., P.E.
George Nowak, P. Eng.

The following awards will be presented over a seated lunch event in the main ballroom:

- **Francis C. Turner Award**: Dallas N. Little, Ph.D., P.E., Dist.M.ASCE, Regents Professor, E.B. Snead Chair Professor of Civil Engineering, Texas A&M University
- **Wilbur S. Smith Award**: Shiraz Tayabji, Ph.D., P.E., M.ASCE, Senior Principal Engineer, Applied Research Associates
- **Airfield Pavement Practitioner Award**: George Nowak, P. Eng., M.ASCE, Deputy Practice Manager, Hatch
- **Francis C. Turner Lecture**

Francis C. Turner lecture will be given by the Francis C. Turner award recipient, Dallas N. Little, Ph.D., P.E., Dist.M.ASCE. The title of his lecture is Two Practical Applications of Chemo-Mechanics to Extend the Life of Our Asphalt Pavement Infrastructure.

Dallas Little is Regents Professor and E.B. Snead Chair Professor of the Zachry Department of Civil Engineering at Texas A&M University. He is senior research fellow for the Texas A&M Transportation Institute and a distinguished member of the American Society of Civil Engineers. Little has published extensively in refereed journals, has presented more than 450 invited lectures, and serves as honorary professor or adjunct professor at three international universities. He recently served as principle investigator for a major component of the $30 million Asphalt Research Consortium project. He has served as consultant on a number of key national and international projects including the Denver Airport design and construction; advancement in chemical soil stabilization technology in Australia and New Zealand; multi-billion dollar design-build highway projects in Texas, the new Doha, Qatar Airport, the planned Bahrain to Qatar Causeway, and the planned new Mexico City Airport. He has been honored by ASCE in 2016 with both the Francis C. Turner and Monismith Lecture Awards.

**Concurrent Technical Sessions**
1:30 – 3:00 p.m., See pages 11-15

**Networking Break & Poster Displays in Exhibit Hall**
3:00 – 3:30 p.m., Regency Ballroom ABCD

**Concurrent Technical Sessions**
3:30 – 5:00 p.m., See pages 11-15

**YOUNGER MEMBER ACTIVITIES**

**Younger Member Session: What I Wish I Knew**
5:45 – 6:45 p.m., Churchill Salon

Moderators: Katherine Kortum, Ph.D., P.E., M.ASCE, Transportation Research Board

Panelists: Jeffrey D. Borowiec, Ph.D., Texas A&M Transportation Institute; Eileen Velez-Vega, P.E., Assistant Vice President, Kimley-Horn, Puerto Rico LLC; Gareth J. Young, P.E., Project Manager, Gulf Interstate Engineering, and Scott D. Murrell, P.E., Principal Civil Engineer, Director, Commercial Airport Services, ARA

Unwritten rules, hard won knowledge through mistakes, and general career advice are things that leaders and respected veterans of civil engineering have earned, and things our younger members need! Come hear a panel discussion on this topic as experienced leaders of the field pass on their hard-won advice to the younger members.

**Younger Member Social Hour**
6:45 – 7:45 p.m., Palm Court

Come network with leaders in the civil engineering field. The event allows younger members an opportunity to speak directly with company leaders, academic administrators, and other “movers and shakers” in the transportation field.

**WEDNESDAY | JUNE 29**

**Continental Breakfast**
8:00 – 8:30 a.m., Colonnade Preassembly

**Concurrent Technical Sessions**
8:30 – 10:00 a.m., See pages 11-15

**Networking Break**
10:00 – 10:30 a.m., Colonnade Preassembly

**Concurrent Technical Sessions**
10:30 a.m. – 12:00 p.m., See pages 11-15

**Technical Tours**
1:00 – 5:00 p.m., See listing on pages 9-10.
TranStar Traffic Operation Center Tour

Houston TranStar Technical Tour

Wednesday, June 29, 1:00 – 5:00 p.m.

The Houston Transtar consortium is a partnership of four government agencies that are responsible for providing Transportation Management and Emergency Management services to the Greater Houston Region.

ICTD registrants for the Houston TranStar technical tour will have an opportunity to see both the Traffic Management Center and the Emergency Operations Center (EOC) during their visit. The Traffic Management Center is a key focus of the tour where guests will view the staff as they manage state-of-the-art technologies to reduce congestion on major roadways, including more than 900 regional Closed Circuit Television Cameras, Dynamic Message Signs (DMS), synchronized traffic signals, speed sensors, ramp meters and other devices. If EOC operation conditions permit, guests will also be able to see the Emergency Operations Center. During emergencies, the center fills with representatives from the four collaborating agencies—as well as such diverse entities as the U.S. Army, Salvation Army, Harris County Toll Road Authority, Amateur Radio Operator volunteers, the American Red Cross, and area local governments—to coordinate a quick, effective response.

ICTD guests will have a first-hand opportunity to observe and learn from the innovative technologies being employed in the Houston region to manage both traffic and emergency operations. Guests will be accompanied by experienced TranStar staff members who will be available to answer their questions.

PDHs earned: 3

Registration Fee: ONS: $55/$65 (Member/Non-Member)

A box lunch will be provided.

Sponsored by
George Bush Intercontinental Airport Tour:
New Terminal C North project – George Bush Intercontinental Airport (IAH)
Wednesday, June 29, 1:00 – 5:00 p.m.

The $244 million project will create a 265,000-square-foot facility, more than 100,000 square feet larger than the existing Terminal C North, with 11 passenger boarding gates to accommodate a mix of United’s narrow-, mid- and wide-body aircraft.

When construction on the new concourse is completed, the Houston Airport System will demolish the existing Terminal C North facility at Bush Intercontinental to enable the reconstruction of the Mickey Leland International Terminal D. The international terminal is critical to Bush Intercontinental’s extensive connecting air traffic, particularly for those customers connecting between United flights and flights operated by United’s international airline partners.

The tour will include a presentation on the redevelopment of the international terminal. Reconstruction of Terminal C is a prerequisite under the facility master plan for the international terminal that permits Terminal D to be redeveloped. The expansion will provide additional gates, make Terminals C and D a single linked facility and provide additional positions for the Airbus A380 and Boeing 747-8. Houston is one of the few airports that sees regular service from the most commonly operated Group VI aircraft – the Antonov AN-124, the Airbus A380 and the Boeing B747-8.

Project Team:
Owner: United Airlines
Program managers: Faithful+Gould, VRX, Inc.
Designers: PGAL, AECOM
Construction Manager at Risk (CMAR): Manhattan Construction

PDHs earned: 2.5
Registration Fee: ONS: $55/$65 (Member/Non-Member)
A box lunch will be provided.
Sponsored by

Houston Uptown Management District Tour
Wednesday, June 29, 1:00 – 5:00 p.m.

Uptown Houston has distinguished itself as the city’s elite destination for fashion. It is the shopping mecca of the Southwest.

Each year, more than 26 million people from near and far are drawn to the exquisite collection of stores at The Galleria, the fourth largest retail complex in the United States, and to the beauty of Uptown Park, a European-styled retail center whose elegant shops exude Old World charm. In addition, hundreds of other specialty shops, boutiques and restaurants are sprinkled throughout the area, offering shoppers an assortment of options including the new BLVD Place, Centre at Post Oak and Post Oak Shopping Center.

With more than 28 million square feet of commercial office space and five million square feet of retail space combined with nearly 7,600 hotel rooms, more than 100 restaurants and a booming residential market, Uptown Houston is... Where You Can Have It All. As one of the world’s leading urban districts, Uptown Houston is poised to become even greater than the prestigious blend of commercial and residential properties that it is today. Through a series of improvement initiatives, Uptown Houston is implementing a strategic vision which will ensure its continued success.

ICTD registrants for the Uptown Houston District tour will begin their tour with a presentation reviewing the recent considerable development occurring in the Houston business district. Along with this growing development, transportation demands have significantly increased. The tour presentation will include how the Houston Galveston Area Council’s (H-GAC) Transportation Policy Council took first steps in meeting this need by approving a transportation improvement program that includes the politically controversial Uptown Bus Rapid Transit (BRT) line. After the presentation, tour attendees will participate on a walking tour of the area highlighting the area’s recent development and proposed transportation system.

PDHs earned: 3
Registration Fee: ONS: $55/$65 (Member/Non-Member)
A box lunch will be provided.
Sponsored by
### SUNDAY, June 26

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| 9:00 a.m. – 4:30 p.m. | Envision Credential Workshop, Regent Salon  
Instructor: Marsha Anderson Baran, M.ASCE, FASCE, University of Arkansas, Conference Co-Chair  
Geoff Baskir, C.M., AICP, M.ASCE, General Engineer, Conference Co-Chair | Regency Ballroom E |
| 10:00 a.m. – 4:00 p.m. | Transportation Camp Texas, Colonnade Salon                                               | Regency Ballroom F |
| 1:00 – 5:00 p.m.  | Updates to 2010 Highway Capacity Manual (HCM), Windsor Salon  
Instructor: Dr. Bastian Schneider, Principal Engineer, Kimley and Associates, Inc. | Colonnade Salon |
| 6:00 – 7:30 p.m. | Ice Breaker Reception                                                                       | Colonnade Salon |

### MONDAY, June 27

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<td>8:00 – 8:30 a.m.</td>
<td>Continental Breakfast in Exhibit Hall</td>
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| 8:30 – 10:15 a.m. | Plenary Session, Grand Salon  
Moderators: Emie Hoyeshield, Ph.D., P.E., FASCE, University of Arkansas, Conference Co-Chair  
Geoff Baskir, C.M., AICP, M.ASCE, General Engineer, Conference Co-Chair  
Welcome Remarks: Robert D. Stevens, Ph.D., P.E., FASCE, 2015 President, ASCE  
Keynote Speakers: Sylvester Turner, Mayor, City of Houston  
Marc D. Williams, P.E., Deputy Executive Director, Texas Department of Transportation  
Wanning Zhai, Southwest Jiaotong University, China, National Academy of Sciences | Regency Ballroom E |
| 10:15 – 10:45 a.m. | Networking Break & Poster Displays in Exhibit Hall                                           | Exhibit Hall    |
| 10:45 a.m. – 12:30 p.m. | Plenary Session, Grand Salon (continued)  
Moderators: Emie Hoyeshield, Ph.D., P.E., FASCE, University of Arkansas, Conference Co-Chair  
Geoff Baskir, C.M., AICP, M.ASCE, General Engineer, Conference Co-Chair  
Keynote Speakers: Ed Emmett, Harris County Judge  
Denise Nelson, P.E., ENV SP, LEED AP, Vice President, Institute of Sustainable Infrastructure  
Robert Barker, Chief Development Officer, Infrastructure, Houston Airport System | Regency Ballroom E |
| 12:30 – 2:00 p.m. | Lunch and Poster Displays in Exhibit Hall                                                   | Exhibit Hall    |
| 2:00 – 3:30 p.m. | Concurrent Technical Session 1                                                            | Exhibit Hall    |
| TRACK A, Rail & Public Transit  
Regency Ballroom E | TRACK B, Development  
Regency Ballroom F | TRACK C, Highway Pavement  
Regency Ballroom G | TRACK D, Airfield Pavement & Aviation Ops  
Colonnade Salon A | TRACK E, Infrastructure Management  
Colonnade Salon B |
| Session 1A: Lessons Learned From China’s High Speed Rail Development and the Prospects in the United States | Session 1B: Envision: Award Winning Projects: The Method and Value | Session 1C: Permeable Pavements Design, Construction, & Maintenance | Session 1D: Trends in Airport Planning, Design, & Construction | Session 1E: M2D2: Changing State DOT Culture to Get the Rules Right |
| Moderator: Kelvin C.P. Wang, Oklahoma State University  
Panelists: Wanning Zhai, Member of Chinese Academy of Sciences; Xiaobo Liu, Qiyun Peng, and Yanjun Qiu, Southwest Jiaotong University, China | Moderator: Marsha Anderson Baran, Gwinnett Village Community Improvement District  
Panelists: Marsha Anderson Baran, Gwinnett Village Community Improvement District; Kp Skolar, Stantec; Chris Mahlberg, HDR | Moderator: Kathie Bulich, City of Houston, Texas  
Overview of Permeable Pavement Structural and Hydrologic Design, Robert Bowers, Interlocking Concrete Pavement Institute  
Preliminary Site Evaluation and Design, Chris Denich, Aquaplant Services Ltd Atlanta Green Infrastructure Initiative – PICP Case Study, Todd Hill, City of Atlanta | Moderator: Dwight Pullen, SIasaka USA Building  
The New Houston Mickey Leland International Terminal, Jarrett Simmons, Houston Airport System  
International Operations Challenges: George Bush Intercontinental Airport, Houston, Lani Van Marter, Houston Airport System  
Commercial Spacesports: Where We Are and Where We Are Going, Brian Gulliver, Kimley and Associates, Inc  
Lessons Learned from Airport Consolidated Rental Car Centers, Jeffrey Jarvis, TransSystems | Moderator: Rayza Bells, Smart Growth America  
Speakers: Roger Miller, Washington State DOT; Billy Hattaway, Florida DOT; Tony Kostoll, Michigan DOT  
Multimodal Development and Delivery (M2D2) is Smart Growth America’s technical assistance program that supports States Departments of Transportation (DOTs) across the country as they improve their institutional capacity to plan, design, construct, operate and maintain state transportation systems for Complete Streets and multiple modes. |
| 3:30 – 4:00 p.m. | Networking Break & Poster Displays in Exhibit Hall                                           | Exhibit Hall    |
MONDAY, June 27 (continued)

3:00 – 5:30 p.m. Concurrent Technical Session 2

**TRACK A: Rail & Public Transit**
Regency Ballroom E

Session 2A: Rail Planning & Management I
Moderator: Michael J. Loehr, CH2M Hill Identification of Suitable High Speed Rail Corridors in the Chicago Region: Moving People and Freight Faster, Mary Kaufman, ASCE T&D Sustainability Committee A Transfer Routes Choice Model of Railway Passenger Based on the Maximum Utility, Jin Zeng and Xiaonan Jin, Beijing Jiaotong University; Chunjiang Deng and David B. Clarke, University of Tennessee Evaluation of MRTS Using Spatial Techniques: A Case Study, Raji Gupta, B Sinivas, P Rajesh Reddy, and Vemula Swathi, Birla Institute of Technology and Science

**TRACK B: Development**
Regency Ballroom F

Session 2B: Transportation & Development I

**TRACK C: Highway Development**
Regency Ballroom G

Session 2C: Highway Development Performance I
Moderator: Hao Wang, Rutgers, The State University of New Jersey Experimental Investigation of Geogrid Properties Affecting Pavement Structural Performance, Mehrdad Sahlan, Saeid Tizel, and Suleyman Golcu, Sabanci University; Erd Tulunerk, University of Illinois at Urbana-Champaign; Volkan Emre, Lice, abana University, Masstast Karasahin, Istanbul University; Chu Pilakorn, Middle East Technical University Use of Variable Energy Penetrometer and Geo-Endoscopic Imaging In Performance Assessment of Working Platforms Constructed with Large Size Unconventional Aggregates, Hosn Kazemee and Erol Tutunkim, University of Illinois at Urbana-Champaign; Younes Hoodabadi, Mige A. Benz Navarrete, and Roland Gourves, Sol Solution Tackiness Properties of Non-Tracking Tack Coats, A. Seo, M. S. Salhanfar, and B. T. Wilson, Texas A&M University Performance Modelling for Botswana Gravel Roadways: Outcomes and Conclusions, A. S. Olof, Botswana University of Science and Technology

**TRACK D: Airfield Development & Aviation Ops**
Colonnade Salon A

Session 2D: Trends In Airport Planning, Design, and Construction I
Moderator: Eileen Welz Vega, Kimley-Horn & Associates The Benefits to Airports of the FAA Airports GIS Program, Michael T. McNemey, The University of Texas at Austin Moving Forward: Taxway Safety Enhancement Program, Andrew Bode and Doug Gregory, Crawford, Murphy & Tilby, Inc.; Mark Day, Blue Grass Airport Traffic Simulation Modeling for Airport Terminal Frontage Roadways, Kelly York, STV Transportation; Airport Rental Car Facility Planning Trends, Mike Coleman, Port of Portland; Daniel Barton, InterWST Consulting, Inc.

**TRACK E: Infrastructure Management**
Colonnade Salon B

Session 2E: Infrastructure Systems Management

TUESDAY, June 28

8:00 – 8:30 a.m. Continental Breakfast & Poster Displays in Exhibit Hall

8:30 – 10:00 a.m. Concurrent Technical Session 3

**TRACK A: Rail & Public Transit**
Regency Ballroom E

Session 3A: Rail Planning & Management II
Moderator: Michael J. Loehr, CH2M Hill Public Sector Passenger and Freight Rail Projects: A Survey of U.S. Practice, D. B. Clarke, University of Tennessee, L. Ogard, Prime Focus, LLC; J. Becket, The Becket Group Tower 55: A Successful Partnership Beyond Your Typical T3, Patrick Haked, Urban Pacific Railroad; Brian Large, Burlington Northern and Santa Fe Railway; Dennis Schulte, HDR The Eagle P3 Project – Denver’s Commuter Rail, Aaron Epstein, Denver Regional Partners CSX Trenton Line Clearance Improvement Project – Contract 1, Christopher W. Wright, AECOM; Derek S. Milhiet, CSX Transportation

**TRACK B: Development**
Regency Ballroom F

Session 3B: Transportation & Development II

**TRACK C: Highway Development**
Regency Ballroom G

Session 3C: Highway Development Performance II
Moderator: Hanson Ozer, University of Illinois, Urbana-Champaign Effect of Different Levels of Moisture Intrusion on Dynamic Modulus and Tensile Properties of Dense Graded Hot Mix Asphalt using Cyclic Moisture Induced Stress Tester, Sarvesh Dhalal and Rizoi Avidinian, The University of Texas at El Paso Measuring Pavement Abdo and Solar Radiation Flux for Asphalt Pavements, John Hencken, Michael Tulowicki, and Thomas Bennett, Rutgers University Investigating the Permanence and Durability Behavior of Asphalt Concrete Mixtures in Repeated Load Creep Tests, Nader Mohamad, Road & Urban Development Ministry, Iraq; Mohammad Malak, Iran University of Science and Technology; Aireza Fardostrazazi, Alkoc Rock Industries, Iran Observational Study on the Pavement Performance Effects of Shoulder Rumble Strip on Shoulders, Sean Coffey and Sen Park, Villanova University

**TRACK D: Airfield Development & Aviation Ops**
Colonnade Salon A

Session 3D: Case-Studies in Airfield Pavement Design & Construction

**TRACK E: Traffic Operations**
Colonnade Salon B

Session 3E: The Next Generation of Transportation Systems Management & Operations
Moderator: John Carlson, University of Wisconsin Madison Panelists: John Carlson, University of Wisconsin Madison; Douglas Wiegand, City of Fort Worth; Eric Fosel, Grand Flaming; Leslie Jacobson, Parsons Brinckerhoff This session will address recent developments and emerging trends that are transforming TSM&O into a next generation of technology and practice, as well as a robust national community of practice. An expert panel of national, state, and local leaders will explore the following topics: Innovative tools and techniques for TSM&O created by the Strategic Highway Research Program (SHRP) 2 chain optimization, TSM&O, and Big Data & Analytics TSM&O Aspects, including TSM&O and Freight Mobility: The Emergence of the Connected and Automated Vehicle, and its implications for transportation policy TSM&O Decision Support Systems, and Big Data & Analytics TSM&O and Freight Mobility: Logistics Management & Supply Chain Optimization

10:00 – 10:30 a.m. Networking Break & Poster Displays in Exhibit Hall
**TUESDAY, June 28 (continued)**

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<th>10:30 a.m. – 12:00 p.m.</th>
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<tr>
<td><strong>TRACK E, Traffic Operations</strong> Colonnade Salon B</td>
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**Session 4A: Rail Infrastructure I**
Moderator: Michael J. Leech, OHM Hill

**Session 4B: Transportation & Development II**
Moderator: Lenor Bromberg, City of Richmond, VA

**Session 4C: Pavement Testing**
Moderator: Erol Tututur, University of Illinois at Urbana-Champaign

**Session 4D: Airfield Pavement Design & Management I**
Moderator: Majed Al-Ghandour, North Carolina Department of Transportation

**Session 4E: Traffic Operations**
Moderator: Md Shokib Chowdhury, The City College of New York

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**12:00 – 1:30 p.m.**
**Francis C. Turner Lecture and Awards Luncheon**
Welcome Remarks: Lenor M. Bromberg, P.E., M.ASCE, T&D President

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**1:30 – 3:00 p.m.**
Concurrent Technical Session 5

**Session 5A: Rail Infrastructure II**
Moderator: David B. Clarke, The University of Tennessee, Knoxville

**Session 5B: Complete Streets**
Moderator: Emilio Alfertork, National Complete Streets Coalition

**Session 5C: Pavement Evaluation & Performance**
Moderator: Erol Tututur, University of Illinois, Urbana-Champaign

**Session 5D: Airfield Pavement Design & Management II**
Moderator: Rich Thoma, Crawford, Murphy & Tilly, Inc.

**Session 5E: Roundabout Operation & Safety**
Moderator: Minuta Saito, Brigham Young University

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**3:00 – 3:30 p.m.**
Networking Break & Poster Displays in Exhibit Hall
Moderator: Walter Kuly, Federal Transit Administration
Flexpress: A Flexible High-Speed Intercity Transit Service, Andisheh Ranjbari and Y-Chung Chu, University of Arizona; Tucson, Mark Holman, University of Queensland
Adaptive Bus Transit Operations for Reducing GHG Emissions, Andrew Alden, Virginia Tech Transportation Institute
Corridor-level Evaluation of GPS-based Transit Signal Priority, Yi Song, Milan Zlatkovic, and Richard J. Parker, University of Utah
Modeling Bus Travel Delay and Travel Time for Improved Arrival Prediction, Srinivas S. Pulgarthrao and Yoshawki Kotegi, The University of North Carolina at Charlotte

Session 6B: The Future of Transportation & Development - Transformative Technologies and Their Impact
Moderator: Samuel Labi, Ph.D., Purdue University
Panelists: Henry Liu, University of Michigan; Am Adhor, Michael Meyer, Consultant, Atlanta; Hao Yang, Lamar University; Samuel Labi, Purdue University
This session will discuss transformative technologies and how these technologies will change the built environment. The panel will motivate a futurist discussion in the fullest sense, including an exploration of alternate futures and what it will take to bring about a desired future. The session will include a presentation by Hao Yang titled, Eco-Interactive Adaptive Cruise Control in the Vicinity of Intersections Considering Vehicle Queues.

Session 6C: Pavement Soils & Subgrades - Compaction
Moderator: Mehran Mazari, Savannah State University
Compaction Quality Monitoring of Lime Stabilized Clayey Subgrade Using Intelligent Compaction Technology, Arjun Kumar, Indian Institute of Technology, Guwahati; Jose Garibay, Ray E. Albritton, and Soheil Mazarian, The University of Texas at El Paso; Mehran Mazari, Savannah State University
Evaluation and Harmonization of Intelligent Compaction Systems, Mehran Mazari, Savannah State University; Jorge Balbrea, Ray Albritton, and Soheil Mazarian, The University of Texas at El Paso; George Chang, The TransMetric Group Inc.; Jimmy Si, Texas Department of Transportation
Factors Affecting Resilient and Permanent Behavior of Unbound Granular Aggregate Base, Sang-Ho Kim, Kansas State University; Jayson Kwan and Mark Wayne, Texas International Corporation
Evaluation of Using Geometric Material & Process of Grouting to Improve Pavement Performance over Sand Dunes Subgrade, Soaft Al-Akallah, Ph.D., Gould G. Sals, Ph.D., Ziman T. Izoma, Al-Farabi University, Kazakhstan

Session 6D: Airfield Pavement Design & Management III
Moderator: Julie Kenkel, Jacobsen Companies Inc.
Economic Assessment of Heated Pavements for Large Hub Airports, Priya Anand, Hall Calvan, Sungwhan Kim, Kashthinogram Gopalakrishnan, and Peter C. Taylor, Iowa State University; Dimitry V. Pyridaiou and Konstantina Glettes, Purdue University
Incorporating Heating Wires and Renewable Energy to Develop an Anti-Icing Airfield Runway Surface, Joseph Daniels, Ernest Heymsfield, and Mark Kus, University of Arizona
Relationship Between Climate Type and Observed Pavement Distress, Timothy Parsons and Aaron Pullen, Applied Research Associates
FAA Airfield ‘Pavement Related’ Advisory Circulars, Gregory Cline, Federal Aviation Administration

Session 6E: Transportation Safety I
Moderator: Zhumin Zhang, The University of Texas at Austin
Prioritize Safety Projects with Confidence Using Two-Step Spatial Screening, Wji Zhang, Federal Highway Administration; Kafeen Hanack and Harshala Sardar, Virginia Polytechnic Institute and State University; Fabio Wang, National Research Council
Guardrail/Briderguide Recommendations for Very Low-Volume Local Roads in Kansas, Ronald Seta and Ted Zafarlin, Kansas Department of Transportation
Operational and Safety Effects of Reduced Cycle Length Strategy, Sinirina S. Pulgarthrao, Synca Taug, and Preethi Govindaram, the University of North Carolina at Charlotte
Underlying Relationships between Fatlak Crashes and All Other NonFatal Crashes, Wei Zhang, Federal Highway Administration; Kafeen Hanack and Harshala Sardar; Virginia Polytechnic Institute and State University; Fabio Wang, National Research Council

WEDNESDAY, June 29
8:00 – 8:30 a.m. Continental Breakfast
8:30 – 10:00 a.m. Concurrent Technical Session 7

Session 7A: The Future of Automated Transit Systems
Moderator: Walter Kuly, US DOT FRA (Ret)
This session will address the latest advances, potential benefits and future of automated transit systems. The session will highlight automated buses operating on roadways, rail transit, automated transit networks connecting different transportation modes, and strategies involving demand response systems.
Speaker: Sam Lott, Kimley-Horn & Associates
This presentation will address the potential impact on transit operations of electronically guided and connected buses along routes and at station stops.
Speaker: Craig Elliott, LSL-Elliott, Inc.
This presentation will highlight the state of the automated people mover (APM) industry. It will cover the major APM suppliers, their products and recent/future installations.
Speaker: Peter Muller, PRT Consulting, Inc.
This presentation will highlight the latest advances and operations of automated transit networks (ATN) around the world.
Speaker: Matthew Lash, Local Motors
This presentation will cover the latest advances and potential of automated demand response transportation systems.

Session 7B: Transportation & Development IV
Moderator: Scott Gibson, Regional Transportation Comission of WashCo County
The Impact of North Dakota’s Oil Boom on Transit Livability, Del Peterson and Elise Pelton, North Dakota State University
Transportation Requirements for Shale Energy Developments: Complexities of Rail Infrastructure Decisions in Argentina, Bruno Agosta, ACIA; Joseph Susman, Massachusetts Institute of Technology
Determining Optimal Limits for Developing Planning Park-and-Ride Facilities Process: Case Study Palm Beach County, Evangelos K. Karas, Florida Atlantic University; Majed Al- Ghannoun, North Carolina Department of Transportation
Laboratory Evaluations of Long-Term Hydrail Performance and Maintenance Requirements for Pervious Concrete Mixes: A Case Study in Southern Brazil, Luiza Hochbach, Washington State University; Vanessa Felzim Passa Dutra, Pauline Schwartz, and Luis Carlos Pinto do Silvo Filho, Federal University of Rio Grande do Sul

Session 7C: Moving Research to Practice: Your Thoughts?
Moderator: C. Michael Walters, The University of Texas at Austin
Session 7D: Advanced Technologies Colonnade Salon A
Moderator: Srinivas S. Pulgarthrao, Ph.D., P.E., University of North Carolina at Charlotte
Safety in a Multi-Modal City: Characteristics of Commercial Vehicle Accidents in New York, Alison Conway, City College of New York
Quantification of Safety Cost Caused by Heavy Trucks: An Illinois Study, Antoniou, Yandong Qiang, and Imad Al-Grad, University of Illinois at Urbana-Champaign
A Methodology for Assessing the Impacts of Oversize Truck Operations on Traffic Safety, Arash Rashandeh, Stephanie Everett, Samuel Labi, and Kamran Sinha, Purdue University; Nathan Afaghianagam, Kasteast University
Effects of Traffic and Geometric Design Characteristics on Truck Crashes on Limited Access Highways, Sunanda Dissanayake, Kansas State University; Nirmala Amarasiri, Sri Lanka Institute of Information Technology

Session 7E: Transportation Safety II
Moderator: Srinivas S. Pulgarthrao, Ph.D., P.E., University of North Carolina at Charlotte
Safety in a Multi-Modal City: Characteristics of Commercial Vehicle Accidents in New York, Alison Conway, City College of New York
Quantification of Safety Cost Caused by Heavy Trucks: An Illinois Study, Antoniou, Yandong Qiang, and Imad Al-Grad, University of Illinois at Urbana-Champaign
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Effects of Traffic and Geometric Design Characteristics on Truck Crashes on Limited Access Highways, Sunanda Dissanayake, Kansas State University; Nirmala Amarasiri, Sri Lanka Institute of Information Technology

10:00 – 10:30 a.m. Networking Break
ESSL, LLC

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Highway Pavement
Mechanical Properties of Multi-function Road Surface and Its Application on Steel Bridge Deck, Yangyang Sun and Changhai Yin, Highway Research Institute, Guangdong Provincial Academy of Building Research, China.

Effective Fatigue in Hot Asphalt Samples Modified by Titanium Oxide Nano-Particles, Javad Tansadeh, Rashid Tansadeh, and Hossein Nasrani, Islamic Azad University, Iran.

Performance of Overlay Tester in Monotonic and Cyclic Loading Modes, Victor Arora, Jose Carballa, Yingiali Abdallah, and Sohel Nazarian, The University of Texas at El Paso.

Predictive Modeling of Pothole Formation due to Traffic and Environment, Leila Sadeghi and John E. Haddock, Purdue University.


Performance Evaluation of Reinforced Roller Compacted Concrete Pavement with Basalt Fibers and Recycled Polyethylene in Warm Region of Iran, Rashid Tansadeh, Javad Tansadeh, Majid Hajj Hasiyev, and Mehnaz Mirsepahi, Islamic Azad University, Iran.


Performance Evaluation of the Impact of Modified Silica Nano-Materials on Hydrophobicity of Hot-Mix Asphalt, Ferayeood Moghadas Negad, Alkubair University of Technology, Iran; Javad Tansadeh and Mandana Soozangar, Islamic Azad University, Iran.

Laboratory Performance Comparison of Stone Matrix Asphalt Mixtures with Polymer Modified Bitumens and Cellulose Fiber Stabilizer, Gohoum Sarang, Lekha B M, Ramesh Tejavath, and Ravi Shankar A U, National Institute of Technology Karnataka, India.

Application of Hydrophobic Coating on Portland Cement Concrete Pavement Surfaces to Obtain Water-Repellency, Alireza Sassani, Ali Arabzadeh, Sungwan Kim, Kashthirangan Gopalakrishnan, Hall Ceylan, and Peter Taylor.

Fabrication of Polytetrafluoroethylene Coated Asphalt Concrete Bimimetic Surfaces: A Nanomaterials Based Pavement Winter Maintenance Approach, Alireza Sassani, Ali Arabzadeh, Sungwan Kim, Kashthirangan Gopalakrishnan, and Hall Ceylan, Iowa State University.


Cluster Analysis of LTPP Data to Estimate MEPDG Traffic Inputs for NHI State and Perform Sensitivity Analysis, Umme Amina Mannan, Jelien Pan, and Rafaqi Tarello, University of New Mexico.


Rutting Potential of Asphalt Pavement Exposed to High Temperatures, Mohammad Hassain, Rohit Mehta, and Naushad Shaik, Bradley University, Md Islam, Colorado State University, Rafaqi Tarello, The University of New Mexico.

Evaluation of Pavement Surface Characteristics for High Friction Surface Treatment (HFST), Giong U, Guangwei Yang, Kelvin C.P. Wang, and Jason Zhan, Oklahoma State University.

Improvement of Thermal and Mechanical Properties of Asphalt Mixture using Conductive Fillers, Hai Viet Vo, Dao-Wook Park, and Woo-Jin Seo, Kunsan National University.

Incorporation of Rice Husk Ash as Cement Replacement, Muhammad Abou-Samha, U.S. Department of Transportation.


Dealing with Construction over Sinkhole-Prone Karst Terrain, Gennaro Marino, Marino Engineering Associates, Inc.


Rail & Public Transit
Hertzian Spring Constant, Nazmul Hasan, SNC-Lavalin Inc.

Influence of Elasticity Modulus of Cement Asphalt Mortar on Temperature Stress and Deformation of CRTS II Slab Track, Song Xiaolin, Zhai Chunfa, and Zhu Xiaojia, Southwest Jiaotong University, China.

The Probability Density Evolution Analysis of Extreme Responses for Vehicle-Track System under Random Rail Irregularities, Xu Lei and Gao Jian Min, Southwest Jiaotong University, China.

A Novel Approach to Assess Railway Track Quality based on Ensemble Empirical Mode Decomposition, Zaiwei Li, Shanghai University of Engineering Science; Xiaoyan Lei, East China Jiaotong University, Liang Gao, Beijing Jiaotong University.

Analysis on Dynamic Performance of High-speed Train Running on Different Types of Ballastless Track Structures, Xuzhiqiang Yuan, Guoying Tian, Kaiyun Wang, and Wanning Zhai, Southwest Jiaotong University, China.

Review of Global Evidence of the Ridership and Transportation System Impacts of High-Speed Rail, Benjamin R. Sperry, Ohio University.

Automated Survey of Railway Conditions: A Preliminary Investigation, Sasankan U, Xuanxing Dai, Kelvin C.R. Wang, Enhui Yang, and Yi Peng, Southwest Jiaotong University, China.

Risk Analysis and Prediction for High-Speed Railway Dispatch and Command System, Gliyan Peng, Chao Wen, and Siyu Tao, Southwest Jiaotong University, China.

Optimizing Dispatching Schedules of Urban Rail Rapid Transit Network, Hzhaou Gu and Xiaobao Liu, Southwest Jiaotong University, China.

Application of Asphalt Mixture for Railway in Korea, Seong-Hyeok Lee, Korea Railway Research Institute; Daey-Wook Park and Hai Viet Vo, Kunsan National University; Hyoek Jung Kim, Kumho Petro Chemical Company.

Transit Reliability Benefits Accessible to Engineers, John Parker and Ben Rommelere, Impact Infrastructure Inc.

Probabilistic Cost Benefit Analysis for Shifting Transit Vehicles Fleet from Gasoline into Compressed Natural Gas in Lebanon, Dima Jawad and Sari Malaeb, Notre Dame University.

Rapid Increase of Privately Owned Motor Vehicles and Lack of Public Transport in Dhaka City, Dhrubor Alam and Ananya Roy, Tokyo Institute of Technology.

Feasibility of Toll Capital Investment Modes in Public Transport Considering Passenger Value, Yiming Xue, Hongyi Guan, and Huannmei Qin, Beijing University of Technology, China.

Effect of Multi-Level Urban Form on Commuting Mode share in Rail Station Areas across the United States: A Seemingly Unrelated Regression Approach, Arefbeh Nasiri and Lei Zhang, University of Maryland, College Park.

Traffic
How Accurate Are Turning Volume Counts Collected by Microwave Sensors? Mitsuru Saito, David Chang, and Grant Schultz, Brigham Young University.

Discretized Travel-Time Model of Dynamic Link, Ying Liu and Zhen-hua Zhang, National University of Singapore; Beijing, Yong Zhang, Soochow University, China; Ming-jun Liao, Beiha University, China; Zheng-chun Zhang, Beijing Communications Road Affairs Bureau, China.

Modeling the Impacts of Driver Aggressiveness during a No-Intercity Metropolitan Evacuation, R. N. Fries, Karazan Ghalie, Karzan Bahaddini, and Xin Chen, Southern Illinois University; Michael Williamson, Indiana State University.


Operational Effects of Slow Vehicle Turnouts on Rural Highway in Alaska, Jeanne M. Bowie and James R. Kinney, Kinney Engineering, LLC.

Urban Travel Time Reliability Under Different Traffic Conditions, Fangfang Zheng and Xiaobao Liu, Southwest Jiaotong University, China; Henk van Zuylen, Delft University of Technology.

Transportation Safety
Generic Methodology for 3-D Available Sight Distance Calculation, Kirikos Amiridis and Nikifloros Stamatopoulous, University of Kentucky, Basil Parianos, National Technical University of Athens, Greece.

Field Analysis of the Effects of Vehicle Speed on Increasing the Noise Levels in the Vehicles through Transverse Rumble Strips, Mahammad Sadegh Bahadori, Khayyam Institute of Higher Education, Iran; Mortazeh Bahadori, Amirkabir University of Technology, Iran.

Mitigating Safety in Utah using the Hot Spot Identification and Analysis Methodology, Grant O. Schultz and Mitsuru Saito, Brigham Young University, Jacob S. Farnsworth, Kimley-Horn & Associates, Inc.

Factors Affecting Accident Frequencies on Curved and Straight/Level Highway Segments, Ugr Eker and Panagiotis Anagnostopoulos, SUNY-Buffalo.

An Analysis of Time-to-Accident Occurrence Using Random Parameters Hazard-Based Duration Models, Tawfiq Sarwar, Ugr Eker, and Panagiotis Anagnostopoulos, SUNY-Buffalo.

High Friction Surface Treatments: A Safety Countermeasure in Roadway Departure Crash Reduction, Joe Cheung, FHWA, U.S. DOT.

Child Pedestrian Safety: Examining Opportunities for Improvements Around Parks, Nick Ferenczak, University of Colorado, Denver.

Development of Crash Prediction Models for Curved Segments of Rural Two-lane Highways, Casey Knecht, Oregon Department of Transportation, Mitsuru Saito and Grant G. Schultz, Brigham Young University.

Development
Land Use and Transportation Modeling, Alireza Gereyval, Michael Baker International; Jacqueline M. Jenkins, Cleveland State University.

Efforts in Transportation Sustainability: Case Study of Villanova University, Patrick McTish, Seri Park, and Liesel Schwarz, Villanova University.

Providing a Methodology to Codify Regulations for Private Parking in the Tehran City, Morzaza Khalili and Mojtaba Ghadri, Parakraz Consulting Engineers, Iran; Amirreza Nickar, Sharif University of Technology, Iran.

Propounding of an Archetype and Preferring the Reinvestment of Dilapidated Town Center of Surat City, Yamee Thakkar, SVNIT, India.

Other
A Flight Ground Waiting Time Threshold Optimization Model, Yaping Zhang, Qi Fan, and Siqi Hao, Harbin Institute of Technology, China; Zhigui Xing, Civil Aviation University of China.

The Impact of Technology on Global Engineering Service Corporation Organizational Performance, William Bering, Louis Berger.

Addressing Uncertainty in Bridge Projects – Estimating the Cost Escalation Pathway Likelihood and Overseen Severities for Infrastructure Expansion Contracts, Abhishek Bhargava, Agile Assets; Sikai Chen; Yu Qiao, Samuel Labi, and Kumanes Sinha, Purdue University.
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Assumption of Risk
All ASCE events and activities are purely voluntary activities, and attendees shall be deemed to understand and accept all risk of possible physical injury that might occur as a result of such participation.

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Early Bird and Advance registrants will receive their name badges and tickets at the Registration desk during registration hours. To expedite the check-in process, it is recommended you bring your email confirmation with you – especially if you registered after June 1.

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Your Conference registration name badge is your admission to the Conference sessions. Tickets are required for the pre- and post-conference events, meals, and special events. Ribbons will be available at the Registration desk. Please remove your badge when leaving the hotel.

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Cancellations must be sent to ASCE in writing or via e-mail by June 1, 2016. All refunds are provided on a case by case basis and are reviewed 30 days post conference.

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Local Medical Facilities
In the event of a medical emergency at the Omni Houston Galleria Hotel, please contact the hotel’s Front Desk. You may also contact the Baylor St. Luke’s Emergency Center - San Felipe, (713) 972-8300, for any medical or dental needs.

Included in Your ICTD 2016 Conference Registration Fee

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<tr>
<th>Included in Your ICTD 2016 Conference Registration Fee</th>
<th>Full</th>
<th>Daily</th>
<th>Guest</th>
<th>Full Registration</th>
<th>Exhibitor</th>
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<td>Welcome Reception in the Exhibit Hall</td>
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See you in the Exhibit Hall!
Exhibits reflecting all areas of transportation and development design, construction and operation will run throughout the conference to give you a look at leading edge suppliers and service providers to the industry and ideas for your projects and operations.

Exhibit Hall Schedule

**Sunday, June 26**
1:00 – 5:00 p.m.  
Exhibitor Move-in  
Welcome Reception
6:00 – 7:30 p.m.
Welcome Reception

**Monday, June 27**
8:00 a.m. – 4:00 p.m.  
Exhibit Hall Hours  
Continental Breakfast  
Lunch  
Networking Break
8:00 – 8:30 a.m.
Continental Breakfast
12:30 – 2:00 p.m.
Lunch  
Networking Break
3:30 – 4:00 p.m.
Networking Break

**Tuesday, June 28**
8:00 a.m. – 3:30 p.m.  
Exhibit Hall Hours  
Continental Breakfast  
Networking Break  
Networking Break
8:00 – 8:30 a.m.
Continental Breakfast
10:00 – 10:30 a.m.
Networking Break
3:00 – 3:30 p.m.
Networking Break
3:45 – 8:00 p.m.
Exhibitor Move-Out

2016 Exhibitors (as of 5/25/16)

**American Concrete Pipe Association**  
www.concretepipe.org  
Booth #6  
The American Concrete Pipe Association is the spokesperson for the concrete pipe industry in all matters affecting the industry’s welfare. ACPA members contribute to the improvement of our environment by producing quality concrete pipe, engineered to provide a lasting and economical solution to drainage and pollution problems.

**BERKEL**  
www.berkelandcompany.com  
Booth #10  
A specialty design-build contractor offering Augered Pressure Grouted (APG) and Drilled Displacement (APGD) Piles, Ground Improvement, Sheeting and Shoring, Underpinning, Anchors, Driven Piles, and Drilled Shafts. Full in-house engineering and design services are available.

**The D.S. Brown Company**  
www.dsbrown.com  
Booth #2  
D.S. Brown Company is a manufacturer of airport, bridge and highway construction products. Pavement Products include Delastic preformed pavement neoprene (polychloroprene) compression seal and Delpatch elastomeric concrete.

**Chemring Sensors and Electronic Systems**  
www.3d-radar.com  
Booth #4  
Chemring Sensors & Electronic Systems is comprised of NIITEK, 3d-Radar and Chemring Detection Systems, and together, they are the leading supplier of vehicle-mounted ground penetrating radar (GPR) detection systems, chemical and biological detection systems, and counter-IED electronic countermeasures.

**ESSL, LLC**  
www.esssoils.com  
Booth #1  
ESSL, LLC manufactures and applies EcSS3000™ – the premier soil stabilization product and process on the market. More than 170 million square feet of clay soils have been injected without failure.

**RDM International, Inc.**  
www.rdmintflinc.com  
Booth #3  
RDM International, Inc. (RDM) is a civil engineering firm specializing in airfield and roadway evaluation, design, and construction phase services.

**Southwest Jiaotong University, Chengdu, China**  
www.swjtu.edu.cn  
Booth #5  
Southwest Jiaotong University (SVJUTU) is a major research university in China. SWJUTU is particularly known for its various transportation programs.

**Terracon Consultants, Inc.**  
www.terracon.com  
Booth #7  
Terracon provides geotechnical engineering, environmental consulting, and construction materials engineering and testing services on transportation projects through more than 130 offices nationwide (16 in Texas).

**Willamette Valley Company**  
www.wilvaco.com  
www.fastpatchsystems.com  
Booth #9  
Fastpatch repairs and preserves concrete slabs and asphalt pavement. Easy and safe to mix and install, 100% solids and VOC free. Intended for spall repairs both large and small. Prevents F.O.D and provides long lasting repairs.
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Cooperating Organizations

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For up-to-date information, visit www.asce-ictd.org.