

61st Arizona Conference on Roads & Streets



April 4th, 5th, and 6th, 2012

**JW Marriott Starr Pass
Resort & Spa**

**3800 West Starr Pass Boulevard,
Tucson, AZ 85745**

Registration Information

Great News!!! The 2012 Roads & Streets registration fee remains at \$250 per person.
Your registration includes:

- Countless Networking Opportunities!!!
- Outstanding Speakers and Presentations with over 50 Professional Development Programs to Choose From – *receive Professional Development Hours Certificate Page*
- Interact with over 85 Trade Show Vendors – *Up-to-Date Information and Assistance*
- Wednesday Opening Reception
- Thursday Continental Breakfast, Lunch and Reception
- Friday Continental Breakfast and Lunch

Please complete and return the conference registration form by Friday, March 16th.

*Note: No refund will be given after March 16, 2012.
Late or on-site registration will be available at a cost of \$325 per person.
Sorry, there are no one-day/partial day/or shared registration packages.*

Spouse/Significant Other Registration for the Conference is \$150
which includes all food functions and special program events.
Children must be accompanied by parent(s) in the Trade Show/food court area.

*Roads & Streets registration does not include the Wednesday Southern Branch APWA Scholarship Golf Outing
or the Wednesday Training for the “Local Public Agency Projects Manual.”
Register separately for these two events.*

All Roads & Streets program times, speakers, rooms are subject to change.
For program updates, visit the website at: www.acecaz.org

Lodging/Parking/Shuttle

All reservations for sleeping rooms at the JW Marriott Starr Pass Resort & Spa will be processed through the administration office of ACEC of Arizona. Priority will be given to public agencies, trade show vendors, and key conference sponsors. Sponsor/exhibitor information is on the web at www.acecaz.org. The room rate is \$103 ++ per night. On-site valet parking will be available for \$5/day or \$20/day overnight guests. Self-parking will be available at the three on-site parking garages. It is complimentary for the day or \$10/day for overnight guests. Additional parking will be offered at the golf club with shuttle service to the resort. This parking is also complimentary for the day or \$10/day for overnight guests.

The alternate hotel for the conference is the Tucson Marriott University Park, 880 East Second Street, Tucson. Room rate is \$103 ++ per night and rooms are limited. Call 520/792-3500. Identify yourself as the "Roads & Streets Conference" block of sleeping rooms. Reservation deadline is March 5th. Hotel room cancellations must be made no later than 12:00 noon four (4) days prior to your check-in date. There will be a shuttle provided by PAG that will run throughout the day on Thursday and Friday.

Questions and Answers

The American Council of Engineering Companies of Arizona is responsible for the administration of the Roads & Streets Conference which is sponsored by:

The University of Arizona/Civil Engineering Department



The Arizona Department of Transportation
(Previously the Arizona Highway Department)



The Federal Highway Administration
(Previously the U.S. Bureau of Public Roads)



Contact ACEC of Arizona at 602/995-2187, fax 602/995-2218, E-mail engineers@acecaz.org
Updated conference and trade show information is available on the website at www.acecaz.org

Conference Committee

Bob Mickelson, Chairman, Kimley Horn & Associates

Tim Ahrens
Trace Baker
Nathan Banks
Brandi Barr
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Geoff Childs
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Registration Form

61st Roads & Streets Conference

April 4th, 5th, and 6th, 2012

Return Registration & Payment to:
ACEC of Arizona
1309 East Echo Lane
Phoenix, AZ 85020
Or Fax to 602/995-2218

For further information,
call 1-602/995-2187
General Questions: engineers@acecaz.org
Billing Questions: accounting@acecaz.org
Website: www.acecaz.org

Note: Save a copy of this form as your receipt.

TYPE OR PRINT CLEARLY

Attendee Name(s) – \$250 per person: _____

Company/Agency _____

Mailing Address _____

City _____ State _____ Zip _____

Business Phone or Cell (_____) _____

E-Mail _____

Spouse/Significant Other (*must be registered to attend events – \$150 per person*)

Please make check payable to “ACEC of Arizona” ... or for payment by Visa, MasterCard, or American Express, please complete the following:

Card Number: _____

Exp. Date: _____ Security Code: _____

Name on Card: _____

Credit Card Billing Zip Code: _____

Cardholder Signature: _____

Early Registration is \$250 per person and Spouse/Significant Other is \$150
Early Registration Deadline is Friday, March 16th ... Late Registration is \$325 per person.
Sorry, no refunds issued after March 16, 2012.

Wednesday, April 4th, 2012

7:00 A.M. Registration – Southern Arizona Branch APWA Scholarship Golf Outing

“Shotgun” start 8 a.m. at City of Tucson Randolph Golf Course. For details, registration, and sponsorships, go to the ACEC of Arizona website www.acecaz.org under “Roads & Streets.”

8:30 A.M. to 4:00 P.M. – New! Training for the Local Public Agency Projects Manual

Speakers: Jodi Rooney, ADOT Local Government Section
Pat Higgins, Logan Simpson Design Inc.

The Local Public Agency Projects Manual provides information and guidance to assist counties, cities, towns, and tribal governments with projects funded under the Federal-Aid Highway Program, from planning to final acceptance. Register through Jodi Rooney at jrooney@azdot.gov; this is a full day of training and limited to the first 30 people. *San Pedro 1-2*

2:00 to 5:30 p.m. – Arizona Ballroom Foyer

Roads & Streets Conference Registration Desk Opens

61st Roads & Streets Conference Opening Event

3:30 to 5:30 p.m. – Tucson E-F



**Introductions by Karla Petty,
Federal Highway Administration**



“Welcome” by Tucson Mayor Jonathan Rothschild



“A Century of Progress” by Amanda McGennis, Senior Vice President, AGC

Brief overview of the changes in construction over the past 100 years including a historical look back at the AGC and its contributions to the industry over the century.



**“Arizona Update” by John Halikowski, Director,
Arizona Department of Transportation**



**“The Connected World and Transportation: Predicting the
Future” by Dr. C. Michael Walton, Ernest H. Cockrell Centennial
Chair in Engineering, The University of Texas at Austin**

Emerging technologies and their attributes will have a game changing influence on tomorrow’s transportation enterprise. What are some of those developments, what will they mean, and how will it alter today’s business practices and models? A sneak preview of what the future might hold for us and the next generation.

5:30 to 7:30 p.m. – Arizona Ballroom

Roads & Streets Opening Reception & Trade Show

Sponsored by Stanley Consultants
Thursday Morning, April 5th, 2012

Continental Breakfast in Trade Show
7:00 to 8:15 a.m. – *Arizona Ballroom*

Conference General Opening Session

7:30 to 8:45 a.m. – *Tucson Ballroom E-F*

Sponsored by Parsons Brinckerhoff

Moderator Frank Medina, P.E.



“That’s Not in the Book’: A History of Arizona You Probably Didn’t Know” by Vincent Murray, Historian, Arizona Historical Research – In celebration of the State of Arizona’s Centennial (1912 to 2012), historian Vincent Murray will share some fascinating stories about people and events in Arizona’s history that are not typically taught in classes or found in history books.



“Creating the Future of Transportation” by Thomas R. Warne, PE, Tom Warne and Associates, Jordan, UT – What does the future of transportation look like? How will we pay for transportation infrastructure and services in the future? How will our role change? How can we thrive in a changing marketplace? Tom will shed some light on these questions and discuss the policies and evolutionary changes needed to create the future of our transportation system.



The FHWA **“Washington Report”** by Victor Mendez, Federal Highway Administrator

Thursday, April 5th Sessions 9:00 to 10:00 a.m.

Transportation Funding History 201

Speaker: Ken Davis, Senior Engineering Manager, Operations Team, FHWA

Last year, Ken discussed the development of the Federal-aid Highway Program – up to the inception of the Interstate Highway Program. This year, he will continue by focusing on the development, authorization, funding and implementation of the Interstate Highway Program, and its specific implementation in Arizona.

Moderator Tim Ahrens ... *Tucson G-H*

ADOT Hydrology Manual Update

Speakers: Ken Akoh-Arrey, Chief Drainage Engineer, ADOT
Brian Fry, Project Manager, JE Fuller Hydrology and Geomorphology, Inc.

ADOT is in the process of updating their Hydrology Manual which has been in use for hydrology throughout the state since 1993. This presentation will highlight changes and updates that will be included in the new revised manual. *Moderator Rob Lyons ... Tucson A-D*

Arizona County Engineers Report

Speakers: AACE President Michael Bryce, Graham Co.; Ferrin Crosby, Apache Co.; Carlos De La Torre, Cochise Co.; Randy Ryan, Coconino Co.; Michael Bryce, Graham Co.; Philip Ronnerud, Greenlee Co.; Mike Speedie, La Paz Co.; Al Kattan, Maricopa Co.; Steve Latoski, Mohave Co.; Bill Bess, Navajo Co.; Rick Harrington, Pima Co.; Greg Stanley, Pinal Co.; Jesus Valdez, Santa Cruz Co.; Tim Stotler, Yavapai Co.; and Frank Sanchez, Yuma Co.

The Arizona Association of County Engineers (AACE) will present an overview of current and upcoming projects in the counties. In addition, an update to the AGC Pavement Preservation Committee Chip Seal Guidelines will be presented by Jeff Smith, Senior Pavement Preservation Specialist of International Surfacing Systems, and Charlie Buchanan, Ergon Asphalt and Emulsions. *Moderator Natalya Hyland ... Tucson I-J*

Best Practices for Constructing and Specifying HMA Longitudinal Joints

Speaker: Stephen J. Cooper, Pavement & Materials Engineer, FHWA, Office of Technical Services

The presentation will provide personnel involved with constructing and specifying of Hot Mix Asphalt (HMA) pavements with the latest information on Longitudinal Joints (LJ) that offers the best chance of obtaining LJ performance equal to HMA mat performance. *Moderator Bruce Kay ... San Pedro 1-2*

Transportation and Climate Change: Exploring the Connections

Speaker: Aaron Golub, Assistant Professor, School of Geographical Sciences and Urban Planning and School of Sustainability, Arizona State University

Transportation systems can accelerate the processes of climate change through carbon emissions; they are impacted by climate change; and can help communities adapt to climate change. In this presentation, we will review research which explores these three relationships. *Moderator Maria Angelica Deeb ... San Luis 1-2*

Innovative Intersection Designs – City of Maricopa White & Parker Major Investment Study

Speakers: Brent Billingsley, Development Services Director, City of Maricopa
Elijah Williams, PE, EPS Group

This presentation will discuss innovative techniques used to tackle a difficult intersection design at the intersection of White & Parker with the Maricopa-Casa Grande Highway. The City and EPS Group collaborated on a Major Investment Study to evaluate options at an intersection with high traffic volumes, difficult angles, utilities and the UPRR. *Moderator Greg Stanley ... Tucson E*

Pathways to Superhighways – Arizona’s Transportation History

Speaker: Rick Powers, PE, Jacobs

Take a step back in time to the origins of Arizona’s transportation system and trace its growth and development to the modern era. This presentation examines the evolution of transportation from footpaths used by the Native Americans, through the development of wagon trails and the railroads, and on to the expansive superhighways of today. *Moderator Giao Pham and Scott Sayles ... Tucson F*

Thursday, April 5th Sessions 10:15 to 11:15 a.m.

I-11 From Another Perspective: The InterMountain West

Speaker: Rob Lang, PhD., UNLV Director, Brookings Mountain West

Most know the importance of I-11 to Arizona ... how about connections elsewhere in the InterMountain West? As the Brookings Institute has selected I-11 as a Transformative Investment for the United States, another perspective on the significance of I-11 will be presented. *Moderator Bob Hazlett ... Tucson G-H*

“Attorneys on the Project Team” and “Analysis of Land Values for Unincorporated Maricopa County/ New Program for Calculating Property/Asset Values”

Speakers: 1) Diane M. Miller, Diane M. Miller, PLLC
2) Chris Plumb, AICP, Manager MCDOT; Vamshi Yellisetty, GIS Manager, Jacobs

First session, 1) Defining the importance of project coordination between attorneys and local public agencies to ensure the project is a success; 2) MCDOT needed an easy method for estimating the cost of right-of-way. Jacobs developed a process to quickly establish costs using the County Assessor’s database and GIS technology. *Moderators Paula Gibson ... Tucson A-D*

Arizona County Engineers Report ... Continued Tucson I-J

Promoting Wildlife Connectivity Across Arizona’s Highways – Past, Present & Future

Speakers: “Past” – Norris Dodd, Senior Natural Resource Specialist, AZTEC Engineering
“Present” – Jeff Gagnon, Research Biologist, Arizona Game and Fish Department
“Future” – Justin White, Roadside Resources Program Manager, Arizona Department of Transportation

Showcase progress in recognizing the importance of promoting wildlife connectivity. Focus on past projects that vaulted Arizona to a world-renowned leader in developing/establishing trends & techniques that promote connectivity, lessons learned from the many ongoing projects and research, and addressing future challenges to sustaining Arizona’s role as leader. *Moderator Karim Dada ... San Pedro 1-2*

Solar in Arizona's Transportation Projects: What, Why, Where, How!

Speakers: Bruce Plenk, Tucson City Solar Energy Coordinator
Anne Reichman, Program Manager, Sustainable Cities Network
Maria Angelica Deeb, PE, MS, MEP, MPA, City of Mesa Transportation Program Manager

Highlight the potential Arizona has for wide implementation of solar power in transportation projects. Showcase different solar projects (structures, lighting and other applications) and provide examples of tools (contracts, financing options, etc.) available to local governments, providing leverage and funding for future projects. *Moderator Cindy Koluch ... **San Luis 1-2***

Highway Safety Manual Overview and Applications

Speakers: Kohinoor Kar, PhD, PE, PTOE, Transportation Safety Engineer, ADOT Traffic Safety Section
Mark Poppe, PE, State Safety Engineer, ADOT, Traffic Safety Section
Mazen Muradvich, PE, Civil Engineer Senior, Maricopa Co. DOT, Traffic Engineering
Chris Milner, PE, PTOE, Engineer, Kimley-Horn and Associates, Inc.

The AASHTO Highway Safety Manual (HSM) provides tools to facilitate improved decision making based on quantitative safety performance of roadways. ADOT will provide a brief overview on the HSM and MCDOT will report on project applications of HSM Network Screening, Project Prioritization, and use of countermeasures. *Moderator Christine Fanchi ... **Tucson E***

Historic Bridges in Arizona and Their Engineers

Speaker: Jerry Cannon, PE, TranSystems

Trace Arizona's historic bridges from territorial days to the early years of statehood through 1949. There are still five bridges remaining that were constructed when Arizona was a territory. Discover these structures and their engineers (*i.e. Ralph Modjeski, who helped design the Oakland-San Francisco Bay Bridge*). Over 30 historic bridges are featured. *Moderator Giau Pham and Rick Sayles ... **Tucson F***

Yoga At Your Desk

Speaker: Cecilia Marquis

A good design has strength, flexibility and balance. Find out how you can, too. Try "Yoga at Your Desk", the perfect solution to getting your life on the road to good health. You'll learn stretches, breathing exercises and meditation techniques that you can do anywhere ... even at your desk.

San Ignacio

Thursday, April 5th Sessions 11:30 a.m. to 12:30 p.m.

Planning for the Future of Arizona – Global Cities Institute – Sun Corridor, Future Corridor

Speakers: Bob Hazlett, PE, Senior Engineer, Maricopa Association of Governments
Scott Omer, PTP, ADOT, Multimodal Planning Division Director
John McNamara, FAICP, AIA, Vice President, AECOM
Tim Strow, Project Manager, Maricopa Association of Governments
Mike Kies, Director of Planning & Programming, ADOT

The Global Cities Institute explored the need to diversify the state's economy, the importance of regional sustainability, and improving the Sun Corridor's competitive position. Development of new regional infrastructure including an inland port and a new interstate freeway are ways to stimulate the State's economic base. *Moderator Troy Sieglitz ... Tucson G-H*

I-10 / Prince Road Project Utility Issues

Speaker: Bill Schlesinger, P.E, and Project Team, AECOM, URS, Pulice & ADOT Representatives

Project overview, including project funding, project schedule, roadway improvements, construction sequencing, utility relocation, utility clearances, utility sequencing and Utility and Railroad agreements focusing on utility issues. *Moderator Dave Goos ... Tucson A-D*

Arizona County Engineers Report ... Continued Tucson I-J

404 Permitting for Transportation Projects

Speakers: Wendy Wonderley, PE, Environmental Programs Coordinator, City of Phoenix
Wayne Colebank, RLA, Vice President, Logan Simpson Design, Inc.
Mike Myers, Associate Vice President, AZTEC Engineering Group, Inc.

This session will look at Section 404 permitting from a transportation perspective. We will provide a brief overview of Section 404 that focuses on identifying when a Section 404 permit is needed, provide information on how to obtain a permit using real-world transportation examples, and discuss permit implementation during construction. *Moderator Karim Dada ... San Pedro 1-2*

Proposed Public Right-of-Way Accessibility Guidelines (PROWAG)

Speaker: Kelly LaRosa, Transportation Safety Specialist, FHWA

A notice of proposed rulemaking for the Public Right-of-Way Accessibility Guide was published in 2011 by the US Access Board. This is a huge step toward finally adopting it as a standard for ADA requirements and the document will be a valuable tool for design and construction of pedestrian facilities in the roadway Right-of-Way. *Moderator Brian Davis ... San Luis 1-2*

UDOT's I-15 Express Lanes Program

Speakers: Julie Dillard, Toll Project Manager, Atkins
Rob Clayton, UDOT Traffic Operations Center Director, UDOT

An overview of the UDOT I-15 Express Lanes implementation, including contracting considerations, design/build challenges, dynamic tolling algorithm and toll rate settings, the use of ISO 18000-6C technology, transponder and reader selection, and ongoing operational customer service and traffic management measures of success. *Moderator Christine Fanchi ... Tucson E*

“Arizona’s Historic Roads – Preserving the Past for the Future” and “Route 66 – Arizona’s Most Famous Highway”

Speakers: Dave Zimmerman, Historic Preservation Specialist, ADOT
Sean Evans, Cline Library Special Collections Archivist, Northern Arizona University

How our system of historic roads has living historic value & how we can preserve & enhance that value. Plus, the life and times of Route 66 – a review of Arizona road networks, the construction and condition of the system prior to Rt. 66, the realignment and improvement era, the coming of the interstate (I-40) and resulting bypass, Rt. 66 preservation, and its current uses and activities.

Moderator Giao Pham and Rick Sayles ... Tucson F

Trade Show Box Lunch 12:30 to 1:30 p.m. – Arizona Ballroom

Lunch in a Bag Sponsored by Atkins

Thursday, April 5th Sessions 1:30 to 2:30 p.m.

Strategies to Optimize Capacity and Mobility

Speakers: Darren Henderson, AICP, Planning Manager, Parsons Brinckerhoff
Chuck Fuhs, Vice President, Parsons Brinckerhoff
Sam Elters, Chief Engineer, Transportation Corridor Agencies, Irvine, CA
Michael Blomquist, Toll Program Director, Riverside County Transportation Commission
Kirk Avila, 91 Express Lanes General Manager, Orange County Transportation Authority
Julie Dillard, Senior Tolls Advisor, Atkins

A panel of experts will discuss the use of managed/express lanes and toll facilities to optimize roadway capacity and mobility; offering case studies, best practices, lessons learned, challenges encountered, and the range of operational enhancements available to transportation agencies, and insight to how these strategies might be applied here in Arizona. *Moderator Bob Hazlett ... Tucson G-H*

Working on the Railroads

Speakers: Robert Travis, Railroad Liaison, ADOT and various RR Reps

General review of project coordination from scoping through final construction when a railroad is involved.

Moderator Al Field ... Tucson A-D

Structural Health Assessment of Bridges

Speaker: Dr. Achintya Halder, Professor, University of Arizona,
Department of Civil Engineering and Engineering Mechanics

Structural health assessment (SHA) of bridges is an important area of research. The U of A has developed a system identification (SI) based approach using 3 components: input loading or excitation, system to be identified typically using FE methods, and output responses caused by excitation, thus reflecting the current state of a bridge as part of a SHA strategy... *Moderator Dave Zaleski ... Tucson I-J*

ADOT Statewide Stormwater Program – Successes and Challenges

Speaker: Wendy Terlizzi, ADOT Water Quality Manager, Arizona Department of Transportation

ADOT's Statewide Stormwater Permit regulates discharges from its municipal separate storm sewer system, industrial, and construction activities. Permit implementation has been met with many successes and challenges. Discussion of ADOT's progress and what the future holds for its stormwater program. *Moderator Don Smith ... San Pedro 1-2*

“The HURF Swap is gone. What do I do now?”

The Federal-Aid Highway Program: Local Government Project Development

Speakers: Jodi Rooney, ADOT Local Government Section
Pat Higgins, Logan Simpson Design Inc.

This abbreviated session will use graphics to provide a “high level” overview of the Federal-Aid Project Development Process that local public agencies follow when developing projects utilizing federal dollars. *Moderator Trace Baker ... San Luis 1-2*

SR 87: Four Peaks Road to Dos S Ranch Road – A Journey through the Boulders

Speakers: Don Gorman, PE, RLS, Project Manager, Valley Project Management, ADOT
Tony Cabrera, Design Manager, Jacobs Engineering Group Inc.

As an important commuter and recreational route between the Valley and the Rim Country, SR 87 with its scenic vistas and mountainous terrain has become more than a transportation facility. The reconstruction of existing southbound roadway was necessary to upgrade operational and safety aspects of the roadway while maintaining its scenic quality. *Moderator Christine Fanchi ... Tucson E*

Beaver Dam Wash Bridge in Mohave County

Speakers: Monte Wilson, PE, Engineering Manager, Mohave County Public Works Department
Astrid Potter, Senior Resident Engineer, ADOT, Flagstaff District
Richard Schilke, Construction Manager, ADOT, Flagstaff District

Flooding in 2005 washed out the southern approach road for the CR 91 Bridge over Beaver Dam Wash. A new bridge was needed that improved hydraulic conditions, load carrying capacity, public safety, debris conveyance and flow conditions while protecting endangered species living in Beaver Dam Wash (a major tributary to the Virgin River). *Moderator Jeanne Sapon ... Tucson F*

Thursday, April 5th Sessions 2:45 to 3:45 p.m.

A Fresh Look at Current and Future Transportation Revenue Streams

Speakers: Eric Anderson, Transportation Director, Maricopa Association of Governments
John Liosatos, Transportation Planning Director, Pima Association of Governments
Curt Lueck, PhD, Principal, Curtis Lueck and Associates

Gas tax, the largest revenue resource for transportation in Arizona has been at the 19 cents per gallon level for twenty years. Find out what the effects of “legislator adjustments” have been and learn about innovative potential new transportation revenue streams. *Moderator Tim Ahrens ... Tucson G-H*

Design and Construction of the Cushing Street Bridge, Tucson, AZ

Speakers: Shawn Silvester, PE, Project Manager, Ashton Contractors and Engineers
Claudia Perchinelli, PE, Bridge Engineer, Structural Grace, Inc.

This bridge is a 2-span Super VI Girder Bridge that crosses the Santa Cruz River and carries the City’s Modern Street Car. It has the longest Super VI Girders TPAC has ever produced in addition to the deepest drilled shafts supporting an AASHTO Girder Bridge. Presentation will focus on design issues and construction challenges of this unique structure. *Moderator Sergio Oliden ... Tucson A-D*

Optimizing Pavement Preservation: An Urgent Demand for Every Highway Agency

Speaker: Dr. Mike Mamlouk, Professor of Civil Engineering, Arizona State University

This presentation will discuss: 1) the concept of preventive maintenance of pavement, 2) pavement conditions that are candidates for preventive maintenance, 3) summary of various maintenance treatments such as crack seal, fog seal, chip seal, microsurfacing, then overlay, etc. and 4) treatment selection. *Moderator Jim Weaver ... Tucson I-J*

Centennial Way Celebrates Arizona’s First 100 Years

Speakers: Wylie Bearup, PE, PhD, Phoenix Street Transportation Dir./City Engineer, City of Phoenix
Shane Silsby, PE, Phoenix Street Transportation Deputy Director, City of Phoenix
Dan Spitz, PE, Co-owner Achen-Gardner Construction, Achen-Gardner Construction, LLC

This fast-tracked, federally-funded project used the Design-Build (DB) process to construct pedestrian, roadway, and aesthetic enhancements to a historic Arizona roadway corridor. This presentation will discuss: 1) the 2-Step selection process; 2) the team’s approach to design collaboration; 3) the project’s result, and 4) lessons learned. *Moderator Don Smith ... San Pedro 1-2*

Local Urban Heat Island Mitigation Initiatives

Speakers: Al Ward, AICP, Senior Planner, Town of Gilbert
Richard Adkins, Forestry Supervisor, City of Phoenix
Mike Gillespie, PE, Town Engineer, Town of Gilbert

The Urban Heat Island Effect is a reality for many municipalities. Mitigation efforts require a combination of natural and engineered components as part of the developing infrastructure. Designs incorporating trees and shade, pervious paving materials and alternative roofing strategies can work together toward achieving sustainable development. *Moderator Brian Davis ... San Luis 1-2*

Gravel Road Improvements on the Navajo Nation

Speakers: Darryl Bradley, PE, Principal Civil Engineer, Navajo Division of Transportation
Morris Muskett, Civil Engineer, Navajo Division of Transportation
Homero Vela, Public Works Director, Navajo County

The Navajo Nation and Navajo County have partnered to improve and gravel over 50 miles of dirt roads on the Navajo Nation. The gravel materials are typically imported from long distances and the use of local materials will help utilize funding in a more effective manner to make more roads passable during inclement weather.

*Moderator Christine Fanchi ... **Tucson E***

SB I-17 Bottleneck Removal – I-10 Stack to Indian School Road

Speakers: Mohammad Rehman, PE, Manager Pre-Design, the CK Group, Inc.
Amara Ibeji, PE, Manager Engineering Design, the CK Group, Inc.
Madhu Reddy, Assistant District Engineer, ADOT
Luis Mota, PE, Vice President/Area Manager, Construction Services, Parsons Brinckerhoff
Greg Brown, Project Manager, Coffman Specialties

Southbound Interstate 17 (I-17) experienced significant delays upstream of I-10 system interchange in Phoenix until an innovative, cost-effective solution was implemented in the fall of 2010. See how creative thinking and outstanding partnering efforts made this tough project a huge success.

*Moderator Jim Schumann ... **Tucson F***

Thursday, April 5th Sessions 4:00 to 5:00 p.m.

Trade Show Closes at 4:30 p.m.

Challenging Times Call for Creative Funding Measures

Speakers: Eric Anderson, Transportation Director, Maricopa Association of Governments
Jim DeGrood, Transportation Services Director, Pima Association of Governments

Maricopa County and Pima County voters passed 20-year plans with a ½ cent sales tax revenue stream in 2003 and 2004 respectively. Since that time, forecasted revenue streams have changed dramatically creating a need to change the cost side of the equation. MAG and PAG have approached this challenge in diverse ways.

*Moderator Tim Ahrens ... **Tucson G-H***

A Year to Remember – Santan Freeway HOV Design-Build – I-10 and SR101L HOV Ramp Bridges

Speakers: Mark Chase, PE, Vice President, AZTEC Engineering Group
Olivier Mirza, PE, Lead Bridge Engineer, Parsons Brinckerhoff

Beyond the 11 miles of HOV median widening, the Santan Freeway HOV Design-Build included two, direct-connector HOV ramps. This presentation will explore a selection of the challenging boundary conditions, problems and solutions that the team encountered while designing and constructing the bridges on this memorable project. *Moderator Jim Potter ... **Tucson A-D***

Sustainable Pavements – A General Perspective

Speakers: Ali Fakh, PE, LEED AP, Principal, Sustainability Engineering Group and Dr. Kamil Kaloush, Associate Professor, Arizona State University

This presentation focuses on identifying various issues pertinent to sustainable pavements. These include an overview of sustainable pavement requirements, current sustainable pavement materials (porous, cool pavement and asphalt rubber), warm mix asphalt, recycled pavement and finally reinforced subgrade pavements.

*Moderator Francis Matic ... **Tucson I-J***

Planning and Environmental Linkages (PEL)

Speakers: Scott Omer, PTP, ADOT, Multimodal Planning Division Director
Brent Cain, PE, HDR, Transportation Planning Manager

The PEL process, a specific product of implementing SAFETEA-LU, seeks to develop subarea and corridor studies that can be used more directly to inform the NEPA process. Effective, conceptual-level transportation planning studies that follow the PEL process provide opportunities both to identify important issues of concern early and to build the agency, stakeholder, and public understanding necessary to successfully address them.

*Moderator Ed Stillings ... **San Pedro 1-2***

ADOT Civil Rights Compliance: Small Business Inclusion, DBE Participation & Nondiscrimination

Speakers: Melissa Boyles, ADOT Civil Rights Administrator
Deanna Graham, ADOT Contract Compliance Program Manager
Lucy Schrader, ADOT Title VI Program Manager

Federal Civil Rights regulations apply to all ADOT programs and all federal aid projects. Recent changes issued by the U.S. DOT have increased enforcement activities nationwide. SBE inclusion has also been added as a component of DBE requirements. Learn how these changes impact how you work with ADOT.

*Moderator Cindy Koluch ... **San Luis 1-2***

Border Planning Update

Speakers: Rudy Perez, Jr., Office of International Affairs, ADOT
Reza Karimvand, PE, Assistant State Engineer, ADOT
Todd Emery, PE, Tucson District Engineer, ADOT
William Ferris, Jr., PE, Principal, Transportation, Stantec
Charlene FitzGerald, Executive Director, Yuma Metropolitan Planning Organization
Matthew Kershner, PE, Project Manager, AECOM
Bill Harmon, PE, District Engineer, ADOT Safford District

There are several recent and ongoing efforts related to planning for multi-modal transportation infrastructure in proximity to the Arizona-Sonora Border. The panel will provide an update on current operations at each LPOE, as well as an introduction to the comprehensive Border Master Plan effort.

*Moderator Dan Marum ... **Tucson E***

I-10 SR90 Traffic Interchange Reconstruction

Speaker: Jackie Watkins, Senior Resident Engineer, ADOT Safford District – Benson Construction

Highlights from the development and construction of the new interchange in Benson.

*Moderator Amanda McGennis ... **Tucson F***

Closing Reception and Trade Show Drawing
5:15 to 6:30 p.m. – Arizona Ballroom Foyer and Ania Terrace

Sponsored by Achen-Gardner

Friday Morning, April 6th, 2012

7:30 to 8:30 a.m. Continental Breakfast – Arizona Ballroom Salon 6

6th Annual AZ Transportation Partnering Excellence Awards

Speakers: Ana Olivares, Deputy Director of Transportation, Pima County
Cade Rowley, Vice President of Business Development, Sundt Construction Inc.

The 6th Annual AZ Transportation Partnering Excellence Awards will be presented to the successful applicants in Construction, Other Infrastructure, Design and General Partnering. The award is sponsored by ACEC, AGC, APQA, ADOT, FHWA, AMCA and TUCA. Come celebrate your colleagues' success on these special projects.

Friday, April 6th Sessions 8:30 to 9:30 a.m.

Getting to the Point – A Geotechnical Challenging Trail Project at the Grand Canyon

Speaker: Gregg Mitchell, Environmental Geologist, HDR Engineering

Through an innovative approach, the geotechnical recommendations helped guide the design and construction of an ADA-compliant trail at Mather Point at Grand Canyon National Park. Constraints had to be addressed including limited access and worker/public safety.

Moderator Chuck Reynolds ... Tucson G-H

ADOT District Engineers Report

Speakers: Jennifer Toth, State Engineer; Astrid Potter, Resident Engineer, Flagstaff; Rod Lane, Globe DE; Lynn Johnson Holbrook DE; Michael Kondelis, Kingman DE; Julie Kliewer, Phoenix Construction; Tim Wolfe, Phoenix Maintenance; Todd Emery, Tucson DE; Greg Gentsch, Prescott DE; Jackie Watkins, Resident Engineer, Safford; and Alvin Stump, Yuma DE.

The ADOT District Engineers will report on their current and upcoming projects. The ADOT State Engineer will begin the session with an update on ADOT's latest program.

Moderator Natalya Hyland ... Tucson A-D

Update from METRO Light Rail – Analysis of Grade Separations for I-10 Phoenix West Extension

Speakers: Wulf Grote, PE, Director Planning and Development, METRO Light Rail
Abhishek Dayal, AICP, Planner III, METRO Light Rail

A general update on all current METRO planning and development projects will be provided to the audience. In addition, a separate presentation will provide detail on the traffic analysis conducted for the Phoenix West Extension to evaluate the need for grade separations along the planned route north of I-10. *Moderator Kammy*

Horne ... Tucson I-J

The Guthrie Bridge Removal

Speaker: Kevin Ashby, HDR, Inc.

The presentation describes the three-phase (study, design, and demolition) process used to demolish the 61-year-old steel bridge without major impacts to the environment or the Arizona Eastern Railroad tracks beneath the bridge. *Moderator Mark Stark ... Arizona Ballroom 3-5*

Impact of Monetary Penalty Driver Feedback on Work Zone Speed

Speakers: Craig Roberts, PhD, PE, Northern Arizona University and Edward Smaglik, PhD, PE, Northern Arizona University

Research was conducted using a changeable message sign with radar (CMSR) at one work zone location on a 4-lane, divided highway in Arizona. The CMSR provided feedback to drivers about the amount of their potential traffic fine, which was triggered by the radar captured speed as their vehicles approached the CMSR.

Moderator Jim Schumann ... Arizona Ballroom 10-12

What Winners Do That Others Don't - Partnering Best Practices

Speakers: Scott Dubay, Project Manager, VASTCO – Lake Mary Road Improvement; Scott Omer, ADOT, Multimodal Planning Division Director – State Long-Range Transportation Plan; James Zumpf, ADOT Multimodal Planning Division, Project Manager – State Long-Range Transportation Plan; Eric Weston, Project Manager, Sundt Construction Inc. – SR303L Cactus, Waddell and Bell Project

Winners of the 2011 AZ Transportation Partnering Excellence Awards will present best practices in partnering, sharing unique approaches in teamwork, community outreach, lessons learned, effective use of charter/mission statements, etc. They will show how their approaches guide exceptional project outcomes in a wide range of project categories. *Moderator Amanda McGennis ... Tucson E*

Ethics in a Public Environment

Speaker: John Bogert, Deputy Director of Operations, ADOT

Working in and/or with government entities requires an understanding of ethical environment and situations that can raise questions as to the appropriateness of the conduct by public employees and officials. This presentation will explore some of the unique ethical issues of working in and doing business with public entities. Learn about situations that may create the appearance of a conflict of interest. *Moderator Stacey McCaleb ... Tucson F*

Friday, April 6th Sessions 9:45 to 10:45 a.m.

Innovation – Extending Cast In Place Box Culverts With Precast Box Culverts

Speakers: Greg Bambauer, PE, Project Manager, Drainage Design Lead, Parsons Brinckerhoff, Inc. Todd Emery, PE, ADOT Tucson District Engineer, ADOT Jay Comes, PE, ADOT Resident Engineer, ADOT Rick Solis, PE, Project Engineer, Kimley-Horn and Associates

Precast (PC) box culverts can be used to extend CIP box culverts to reduce construction durations, which reduce costs associated with traffic control, construction inspections, etc. and can significantly reduce exposure to work zones. The ADOT Tucson District has implemented the use of PC culverts on a few of their more recent projects. *Moderator Chuck Reynolds ... Tucson G-H*

ADOT District Engineers Report ... *Continued Tucson A-D*

ADOT Passenger Rail Corridor Study: Tucson to Phoenix

Speaker: Michael Kies, Director of Planning and Programming, ADOT MPD

This program will provide an update on the progress ADOT has accomplished to plan a Passenger Rail System linking Tucson and Phoenix. *Moderator Karen Urban ... **Tucson I-J***

ADOT LRFD Substructure Policies

Speakers: Naresh C. Samtani, PhD, PE, President, NCS Consultants
Jean A. Nehme, PhD, PE, State Bridge Engineer, ADOT Bridge Group

Since 2005 ADOT has developed comprehensive LRFD-based policy guidelines for bridge substructures and retaining walls. The presentation will provide a background and discussions of various policies with an emphasis on interaction between structural and geotechnical specialists.

*Moderator Claudia Perchinelli ... **Arizona Ballroom 3-5***

A Rating System for Sustainable Infrastructure

Speaker: Tim Psomas, Chairman of the Board, Institute for Sustainable Infrastructure

The Institute for Sustainable Infrastructure (ISI) is dedicated to forging a new vision for sustainable infrastructure. ISI seeks to create incentives and balancing of project features to attain sustainable performance measured according to environmental, social and economic best practices. The newly developed tool for such measurement, Envision, will be presented.

*Moderator Tom McGovern ... **Arizona Ballroom 10-12***

Best Practices for Long-Range Transportation Planning Studies

Speakers: Denise Lacey, Senior Planner, Maricopa County DOT
Richard Ellis, Engineering Division Manager, Pima County DOT
Mike Willet, PE, Assistant Public Works Director, Yavapai County

How can jurisdictional agencies meet their goals for future travel demand needs while complimenting regional transportation framework systems? This interactive session will identify lessons-learned, effective strategies, and opportunities to build consensus to ensure successful transportation studies and project development.

*Moderators Troy Sieglitz and Jason Pagnard... **Tucson E***

Professional Ethics in the Facebook® Era

Speaker: P. Douglas Folk, Attorney, Folk & Associates, P.C., Phoenix, AZ

Arizona's Board of Technical Registration can refuse registration or impose discipline on any applicant or registrant convicted of a felony or other offense evidencing a lack of "good moral character and repute." This professional ethics program will examine the Board's disciplinary statutes and rules, the requirement for mandatory disclosure of prior offenses, and the potential consequences for applicants and registrants who have a criminal record. *Moderator Stacy McCaleb ... **Tucson F***

Yoga At Your Desk

Speaker: Cecilia Marquis

Your body is a marvel – engineered to work and play efficiently. Yoga is a great way to keep your best asset – *YOU* in tip-top shape. Yoga will improve your focus and lift the stress off your life. Learn some stretches and breathing techniques you can do right at your desk. Find a way to gain strength, flexibility and balance in your life. *San Ignacio*

Friday, April 6th Sessions 11:00 to Noon

Update on Concrete Pavement Preservation from a National Perspective

Speaker: Larry Scofield, Dir. of Engineering and Research, International Grooving and Grinding Assoc.

The presentation will provide an “Update on Concrete Pavement Preservation from a National Perspective.” It will discuss: 1) results of a recent FHWA ETG survey identifying the states’ practices regarding how they use the PMS systems to manage concrete pavements; 2) state-of-the-practice in concrete preservation, and 3) NGCS Update. *Moderator Jim Weaver ... Tucson G-H*

ADOT District Engineers Report ... Continued Tucson A-D

Planning for London 2012

Speaker: Andrew Hodgson, Atkins

Who, when and how – and what does it all mean? Understanding spectator and workforce travel for the 2012 London Olympic and Paralympic Games. *Moderator Mark Milstone ... Tucson I-J*

Obed Road Bridge Rehabilitation Design & Construction

Speaker: Jerry A. Cannon, PE, TranSystems Corporation

The Obed Road Bridge was constructed between 1916-17. The bridge is a six span steel pony truss and crosses the Little Colorado River. The presentation will include a historical overview of the bridge; how it was designed and built; and later modified and rehabilitated to support HS20 live load plus resist scour effects. *Moderator David Zaleski ... Arizona Ballroom 3-5*

SR 101 HOV Lanes Design-Build, 30 Miles in less than Nine Months

Speakers: Steve Mishler, PE, ADOT Project Manager

Allen Mills, JV Project Manager, Kiewit/Sundt

Travis McCarthy, PE, JV Deputy Project Manager, Kiewit/Sundt

Paul Dickman, PE, Area Manager, Principal Project Manager, Parsons Transportation Group, Inc.

Steve Boschen, PE, GEC Project Manager, POINT Engineers

Sixty (60) HOV lane miles from I-10 to Tatum Boulevard in 257 calendar days ... Design & Construction of One Mile every 8.5 Days ... Keys to Success: What is needed to construct? What is needed to inspect?, and What is needed to As-Built? *Moderator Chad Andrews ... Arizona Ballroom 10-12*

PARA Studies Success Stories

Speakers: Mike Kies, PE, Assistant Director of Planning & Programming, ADOT
Jennifer Pyne, AICP, Project Manager, URS Corporation
David Wessel, Manager, Flagstaff Metropolitan Planning Organization
Jim Townsend, AICP, Midwest Region Transportation Planning Manager, Wilson & Company

This session will provide an overview of ADOT's PARA program, including a brief description of the program and history in terms of years, number of studies initiated and dollars spent. Multiple agencies will relay success by describing the issue(s) studied, the study process, and any outcomes/projects achieved as a result of the studies. *Moderator David Duffy ... Tucson E*

State Route 303L (Happy Valley Road to Lake Pleasant Parkway)

Speakers: Mark A. Chase, Vice President, AZTEC Engineering Group, Inc.
Tim Muller, PE, Southwest Regional Manager, Austin Bridge & Road
Mark Wheeler, Project Manager, Arizona Department of Transportation

This section of the Loop 303 was contracted by ADOT utilizing design-bid-build. ADOT, AZTEC Engineering and Austin Bridge & Road developed innovative solutions in the field during construction saving more than \$1M on this \$100M project and cut the schedule by one month thanks to teamwork, partnering and communication. *Moderator Jeanne Sapon ... Tucson F*

Friday Lunch, April 6th Noon to 1:30 p.m. – Arizona Ballroom Salon 6-7

Welcome & Introductions by John Hauskins, P.E., Director,
Maricopa County Department of Transportation

Arizona Highways – A Scenic Journey Along Arizona's Highways and Byways by Win Holden, Publisher, Arizona Highways Magazine – *Arizona Highways'* award-winning photography and travel journalism and its commitment to discovering the state's treasures has brought the beauty and splendor of Arizona to visitors and natives alike for more than 85 years. *Arizona Highways* was first published on April 15, 1925 by the engineers in the old Arizona Highway Department (now ADOT).



2nd Annual Arizona Transportation Legacy Awards

Presented by: Paula Gibson, Chief, Right of Way Group, Arizona Department of Transportation *and* John M. Bernal, P.E., Pima County Deputy Administrator

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