

AMERICAN SOCIETY OF HIGHWAY ENGINEERS

The Sonoran Bypass Newsletter

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Mission Statement

"Provide a forum for members and partners of the highway industry to promote a safe, efficient and sustainable highway system through education, innovation and fellowship."

President's Message



The Phoenix Sonoran Section is off to a great start in 2010! We're actively recruiting new participants and I'm encouraged that we'll have 60 members by the end of March, well on our way to 80 by year end. If you have any interest being involved with the Board or serving on one of our committees, I encourage you to attend our breakfast meetings or e-mail me at jderr@gfnet.com

We continue to receive positive feedback from both consultants and public agencies on the excellent forum we are providing. This in turn has attracted topical speakers who can discuss the challenges and opportunities that Arizona will have in the upcoming year. Many fine associations exist in the Valley, but ASHE provides a focus on highways and roadways for which much of the limited funding is available.

At the time of publication, we're waiting for Washington to tackle a potential second jobs bill and re-authorization, but as we all know things in DC are very dynamic. We plan on addressing this topic at an upcoming breakfast meeting or on our website.

While it seems like only a short time ago, we are fast approaching nominations for the upcoming year's officers. The board will be presenting their slate of candidates for the member's consideration. Please be watching your email for our announcement.

I'd like to take this opportunity to personally thank our Newsletter sponsors for their participation in this quarter's publication. Their support will promote our Section to the engineering community and provide additional funding for our membership services. An added benefit to our sponsors is the ability to contribute to our Newsletter by showcasing a featured project in an upcoming issue. Additionally, we will be continuing to keep our members informed on the industry and our Section in the coming weeks with the launching of our website, www.ashephx.org.

In closing, the next quarter will be an exciting time, our continued growth and involvement in our engineering community will bring the Phoenix Sonoran Section to the forefront of our industry.

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And the Newsletter winner name is.....

The Sonoran Bypass

Thanks for all the fabulous suggestions. Be sure and congratulate our winner, John Derr, at our next event.

Calendar of Events

Event This Month

March Breakfast Meeting

Tuesday, March 9, 2010

- 7:30-8:00 AM Registration and Breakfast
- 8:00 AM Presentation:
Wylie Bearup, City of Phoenix and
Gary Aller, ASU

\$20 for ASHE members

\$25 for Non-Members and Walk-Ins

Location: Hotel Highland, 2310 East Highland Avenue, Phoenix ([New Meeting Location](#))

If you would like to help with upcoming events or have a program topic.....

Please contact:

Jim Mischler
480-921-6882

mischler@pbworld.com

or

John Derr
602-553-8817

jderr@gfnet.com

Upcoming Events

| DATE | EVENT and LOCATION | SPEAKERS and TOPIC |
|----------------|--|---|
| March 9, 2010 | March Breakfast Meeting Hotel Highland 2310 East Highland Avenue, Phoenix | Wylie Bearup, City of Phoenix Gary Aller, ASU Alternative Project Delivery Methods |
| April 13, 2010 | April Breakfast Meeting TBD | Gary Fromm, Jacobs Chris Kmetty, City of Peoria Beardsley Road Connector |
| April |  2010 Inaugural ASHE Golf Outing TBD | Contact John Willet 602-266-7983 johnwill@swte.us |
| May 11, 2010 | May Breakfast Meeting TBD | Al Kattan, MCDOT TBD |



National Conference

Cincinnati, Ohio; June 9-13, 2010

For more information:

<http://www.ashe2010.org/>

E-Mail

To receive ASHE updates via e-mail,
please contact Carol Hardy.

602-553-8817, Ext. 312

chardy@gfnet.com

Winter Events

December 2009

Bill Dehn, URS; Mike Chase, Stanley Consultants; Travis McCarthy, Sundt Construction; Allen Mills, Kiewit; and Annette Riley, ADOT

The SR 202 Design Build Team gave an update on this major component of our Valley Freeway system as they reach the one year mark.



January 2010

Doug Nintzel, ADOT

Mr. Nintzel, the agency spokesman for ADOT Freeway projects and other programs, discussed the challenges in keeping the public informed and maintaining traffic flow during construction operations.



February 2010

Bob Hazlett, MAG

Mr. Hazlett is a Senior Engineer with Maricopa Association of Governments (MAG). Bob gave a status and budget update for Recent Proposition 400.



Membership Update

New Members

We proudly welcome the following new members:

Yung Koprowski, Lee Engineering

Tim Aherns, HDR

Greg Creaser, Speedie and Associates

Gary Melita, Stanley Consultants

John Patterson, CEI

Rod Penniman, AMEC

David Burrows, Gannett Fleming

Mary Anne Derr, Gannett Fleming

Mike Gilliland, Aztec Engineering

Chris Woolery, Aztec Engineering

David Rutkowski, Aztec Engineering

Total Section
Members:

54

Transitions & Awards

What have you done lately that deserves a pat on the back? A promotion, an award, a new job? Let us know so we can celebrate your success!

Yung Koprowski has joined the Phoenix office of Lee Engineering as an engineering designer and analyst. In addition to being one of the newest members in ASHE, Yung is actively involved in ITE, ITS AZ, and WTS. She can be contacted at ykoprowski@lee-eng.com.

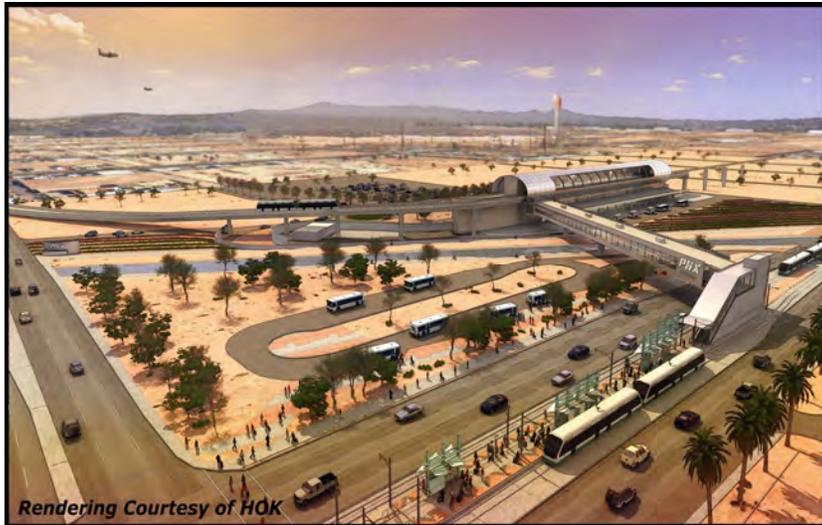
Nominations

The Phoenix Sonoran Board Members will be presenting their slate of candidates for the 2010/2011 Year. Members should be watching for the upcoming ballots via email. Any questions or comments, please contact Carol Hardy at chardy@gfnet.com.

Why ASHE?

Why join the Phoenix Sonoran Section? While there are many strong organizations supporting engineering, ASHE is focused on highways and roadways. Much of the available funding is focused on transportation and roadway projects, the golden egg so to speak. While we are a new section, joining and sponsoring at this early stage will show your foresight in getting in on the ground floor and helping to shape the section with a focus on Arizona issues. We continue to grow in strength since our inception resulting in our ability to attract speakers who are relevant rather than rehashing projects from the past. This inexpensive membership allows an opportunity to meet leaders in our industry and grow with us in the future. Please contact Maher Osman at mosman@cie-az.com or Yung Koprowski at ykoprowski@lee-eng.com if you have any questions, need additional information, or would like an application. GO TEAM ASHE!!

Featured Transportation Project



Design and Planning of the PHX Sky Train™

The City of Phoenix Aviation Department (Aviation Department) embarked on a mission in 2002 to improve the increasing flow of people and automobiles moving through Phoenix Sky Harbor International Airport. They selected Gannett Fleming as the lead designer in the development of an automated people mover system to run beneath the city's airport. Following an extensive transportation planning effort, the project evolved into the PHX Sky Train™ – a predominantly elevated, five - mile

long system designed with a commitment to Leadership in Energy and Environmental Design (LEED®) certification and transit oriented development (TOD) principles.

Two Stages of Design and Construction

The first stage of the PHX Sky Train project focuses on the design and construction of three stations and 12,000 lineal feet of guideway, of which 9,000 feet will be elevated. The guideway will connect passengers between key airport facilities with strategically located stations at Terminal 4, which currently services 80 percent of the airport's passengers and the East Economy parking lot. The first segment of the PHX Sky Train will also transport passengers to a new Airport Ground Transportation Center that includes a connection to the city's highly successful METRO Light Rail system. Stage one is expected to be completed in 2013.

The second stage, planned to be complete in 2020, will continue west from Terminal 4 and will be approximately three miles in length, with provisions for four stations. It will connect the remaining airport terminals, parking, ground transportation facilities, and the airport's rental car center.

Initial Challenges

Several obstacles to the project design required coordination with key officials and organizations prior to transitioning into final design and construction.

The Aviation Department and Gannett Fleming worked closely with the Federal Aviation Administration to ensure its approval in constructing a primarily elevated train system through the airport, including an aerial crossing of an active taxiway.

Constructability analyses were undertaken in the planning phase to ensure the construction could be executed with acceptable disruption through an active airport. Conceptual construction scenarios were carefully coordinated with airport staff, as well as impacted airlines and tenants, prior to moving into detailed designs.

To minimize the impacts to the existing airfield, the Aviation Department partnered with the Arizona Department of Transportation (ADOT), the Federal Highway Administration, and the Maricopa Association of Governments to remove S.R. 153 from the regional freeway system and change ownership from ADOT to the City of Phoenix. A portion of this roadway, now renamed 44th Street, will be used to carry the PHX Sky Train as part of the first phase of the project.

Featured Transportation Project (continued)

Innovative Features

The train's aerial guideway in stage one includes a crossing over Taxiway R that features 75 feet of clearance over the taxiway and a main span of 340 feet. This differentiating feature created a more cost-effective and operationally superior alignment for the train, and it represents the first time, worldwide, that a transit or vehicle bridge will be constructed over an active taxiway.

The train itself will be electrically powered and operated on a dedicated guideway with convenient and seamless two- to three-minute headway service to shaded and/or climate-controlled stations; it will also provide intuitive connections at terminal passenger levels and direct, nonstop service between stations. To enhance the passenger experience further, integrated public art installations are planned for all stations.

As part of the train procurement process, the Aviation Department initiated a design-build, operate, and maintain contract procurement for the train system supplier. This process assured a competitively priced train system with a start-up and operational plan tailored to the airport's needs.

Sustainable Design Features

- Implementation of the PHX Sky Train will relieve terminal roadway and curb congestion and is projected to result in approximately 20,000 fewer vehicles per day at the city's airport, thereby reducing greenhouse gas emissions by nearly 6,000 tons annually and ensuring the airport's roadways flow freely.
- Promotion of TOD through the proximity of the new 44th Street Station to the city's METRO Light Rail encourages use and further growth of public transportation, as well as supports development.
- Situated adjacent to Pueblo Grande Museum and Park of the Four Waters, a National Historic Landmark, the 44th Street Station site will be redeveloped from an existing industrial site. Facilities and infrastructure will be designed to integrate with the adjacent park and museum, and the site will be finished with low-maintenance and high-sun tolerant desert landscaping.

Sustainable Stewardship

In support of the city's vision for LEED certification, many sustainable green building and development practices are incorporated into the PHX Sky Train project:

- Accessibility to public transportation
- Congestion relief
- Stormwater quality management plans
- Non-heat island roof designs
- Low-water use facilities
- Optimized energy use facilities
- Construction waste management plans
- Use of recycled materials
- Use of regional materials
- Low-emitting materials
- Daylight illumination.



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