President’s Message
Steven Itagaki, PE, TE, PTOE

Dear ITE Southern California Members,

In the news, President Barack Obama pushed infrastructure spending in his State of the Union address, linking it to the country’s economic future. “We will put more Americans to work repairing crumbling roads and bridges. We will make sure this is fully paid for, attract private investment, and pick projects based on what’s best for the economy,” Obama said. The president plans to use half of the funds the U.S. will save from drawing down wars in the Middle East for high-speed rail and infrastructure repairs and issue an executive order that would minimize regulations that delay construction projects. “Infrastructure is a way to make America more efficient,” said Andrew Herrmann, president of ASCE.

Our first luncheon meeting of 2012 was held at the Monterey Hills Restaurant in Monterey Park. Our guest speaker was James Pinheiro, Deputy District Director, Operations and Maintenance, Caltrans District 12. Mr. Pinheiro, also assisted by Fedrico Hormozi, presented on “Applying Intelligent Transportation Systems (ITS) to Orange County Freeways”. (See the Scribe Report on Page 3). You can also view the photos of this event at our website (www.itesocal.org) under the Photos tab.

Our February newsletter is sponsored by Sensys Networks. We truly appreciate the support of our sponsors who help offset the costs of our events. See Page 7 of this newsletter for information on sponsorship opportunities.

Historically, our joint meeting with the Central Coast Section has been at the Plug Nickel restaurant in Westlake Village. However, the restaurant no longer services the banquet facilities. Therefore, our next luncheon meeting will be held at the Los Robles Greens Golf Course (Thousand Oaks) on Tuesday, February 7th at 11:30 AM. Our guest speaker will be Fred Luna, Program Manager for Santa Barbara County Association of Governments (SBCAG). Mr. Luna will speaking about “Current SBCAG ITS Programs” supported by Kimley-Horn and Associates. (See the flyer attached towards the end of this newsletter). Please be sure to RSVP with Sri Chakravarthy at srikanth.chakravarth@kimley-horn.com before noon on Friday, February 3rd.

See you there!
February 2012

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February
- Thurs 2nd, 12:00 Noon, PROWAG Comments Deadline (contact: msuter@santa-ana.org)
- Fri 3rd, 12:00 Noon, Section Meeting RSVP Deadline (contact: Secretary-Treasurer)
- Tues 7th, 11:30 AM, Joint ITE So Cal+Central Coast Section Meeting at Los Robles Greens Golf Course (Thousand Oaks)
- Wed 22nd, 12:00 Noon, Caltrans SR2S Workshop RSVP Deadline (contact: dale_benson@dot.ca.gov)
- Fri 24th, 11:59 PM, ITE So Cal March Newsletter Deadline (contact: Newsletter Editors)
- Tues 28th, High Speed Rail Summit, Washington DC (www.ushsr.com)

March
- Fri 23rd, 10:00 AM, Joint ITE So Cal+San Diego Section Workshop, El Adobe Restaurant (San Juan Capistrano)

April
- Wed 18th, 11:30 AM, Joint ITE So Cal Section Meeting at Monterey Hill Restaurant

May
- Wed 23rd, 5:00 PM, ITE So Cal+OCTEC Meeting+Student Chapter Presentations at Holiday Inn & Suites (Fullerton)

June
- Wed 13th, 8:30 AM, ITE So Cal Mini Workshop Business Meeting at Monterey Hill Restaurant (Monterey Park)
James opened up his presentation by identifying Caltrans main objectives:

- Improve Safety and Mobility
- Manage Demand, Reduce Congestion
- Share information with Stakeholders
- Provide information to Motorists

And in order to provide a "Glimpse Into The Future", a snapshot of Orange County’s facts was provided to set the stage. This included its area, population, and the most interesting freeway stats:

- 292 Centerline Miles
- 2,124 Lanes Miles
- 240 Lane Miles of HOV
- 50 Centerline Miles of Toll Road
- 2.85 Billion AVMT (Average Vehicles Miles Traveled)
- 60,000 Vehicle Hours of Delay per Day (<35 mph)

With these facts, it leads to current challenges such as congestion, delay and growth in travel demand including everyone’s battle with "limited funding".

Then, he posed the question: “How do we meet these challenges?”

Answer: “Intelligent Transportation Systems!”

Caltrans existing ITS/Traffic Management System (TMS) inventory consists of:

- 250 Closed Circuit Television (CCTV) Camera Systems
- 57 Changeable Message Signs (CMS)
- 200 Miles of Fiber Optic Trunk-line Cable
- 337 Ramp Meters Operational
- 560 Vehicle Detection Locations
- 486 Traffic Signal Intersections

Understanding facts and the ITS/TMS inventory, our "Glimpse Into The Future" is to utilize the existing infrastructure and to provide upgrades using the latest technologies in order to manage our freeway system more efficiently addressing the challenges that are faced every day and the future.

These technologies include:

- Internet Protocol (IP) Based Systems
- Voice Over IP
- Pattern Recognition
- High Definition (HD) Cameras
- Light Emitting Diode (LED) CMS
- Wireless Systems
- Active Traffic Management
- Traffic Management Center (TMC) to TMC integration

James went on to explain the value of each of these technologies. The most notables were the successful implementation of an IP Based System along Beach Blvd (this occurred from assistance of..."
OCTA...Thanks Mr. Keith!), then the impressive in-vehicle communication systems and how “active traffic management” provides the ability to dynamically manage recurrent and nonrecurring congestion, to maximize the effectiveness and efficiency of the system, and to increase throughput and safety through the use of integrated systems with new technologies.

Thank you Mr. Pinheiro for your insight and providing our “Glimpse Into The Future”.

**Legislative Analysis**

*Thong Ngov, PE (Los Angeles County DPW)*  
ITE So Cal Legislative Analyst

Voters approved Proposition 1A, the “Safe, Reliable High-Speed Passenger Train Bond Act”, in 2008, authorizing the state of California to issue nearly $10 billion bonds to partially fund the high-speed rail (HSR) system connecting Los Angeles to San Francisco. In this issue, we will provide an update on the development of the HSR since approval and the status of an immense public works undertaking.

**California High-Speed Rail: Moving Forward or Derailed?**

Speeds of up to 220 mph, 800 miles of tracks, travel between Los Angeles and San Francisco in under 2 hours and 40 minutes. Impressive numbers and Californians loved it. Back in 2008, the voters approved Proposition 1A, sold on the potential of linking large metropolitan areas and interconnecting that HSR system to transportation alternatives such as intercity rails. The California High-Speed Rail Authority (CHSRA), created by the state in 1996 with the purpose of connecting northern and southern California and major metropolitan areas in between, estimated the total cost to develop and construct the entire HSR system at about $45 billion. Today, the estimated cost ballooned to $100 billion. While the CHSRA plans to fund the project with a combination of federal, state, local, and private sources, no long term funding commitment has been identified.

In his “State of the Union address”, Governor Jerry Brown has made an unequivocal announcement of his support for the HSR and for constructing the first segment of the system at Central Valley this year. Meanwhile Assemblywoman Diane Harkey is standing by a bill she introduced this year to halt bonds for the HSR. Will the California HSR project move forward or be stopped on its track?

**Funding Issues**

On November 1, 2011, the CHSRA released a Business Plan and on November 3, 2011, the CHSRA’s Board approved a Funding Plan to formally request access to $2.685 billion of the Proposition 1A bonds to match $3.5 billion in federal money to fund the Central Valley track or lose the money altogether if not used by September 30, 2012. The Central Valley track is considered an “Initial Construction Segment” (ICS) and would lay up to 130 miles of HSR line from Merced to Bakersfield.

As described in the Legislative Analyst’s Office, LAO Report, this segment an “unusable segment” as this stretch of the track would not operate high-speed trains until completion of a usable segment and therefore does not meet the requirement for Proposition 1A funding. The California High-Speed Rail Peer Review Group, PRG Report, noted that even if the initial ICS can be completed within the designated $6 billion cost estimate, funding for the Initial Operating Segments at an estimated cost between $25 to $30 billion has not been found nor has the environmental clearances been completed. The PRG Report further states that the Funding Plan fails to identify any long term funding commitments and that CHSRA made it clear that there will be no private sector interest in the HSR project until the full public role is identified, which may be years to come.

**To Construct or Not**

The decision to begin the system at Central Valley in order to secure federal funding may increases financial risk if no further funding source materialize after the initial Federal contributions. As described in the PRG Report, the two end segments, from San Jose to San Francisco and from Los Angeles to Anaheim, carries nearly 28 million passengers annually compared to the San Joaquin segment of 1 million annually. This decision amounts to spending all available funds of $6 billion and hoping for the rest of $94 billion later. In addition, the first phase of the project connecting San Francisco to Los Angeles and Anaheim has been extended from 2020 to 2034 further adding uncertainty to the overall project plan.

The CHSRA is racing to begin construction by September 30, 2012 or lose federal funding. The irony is that if CHSRA starts building without securing future funding in order to secure $3.5 billion, it could end up losing billions more and have tracks run nowhere.

Additional information regarding the California High-Speed Rail can be found at the following hyperlinks.

California High-Speed Rail Authority Business Plan, November 1, 2011  
[Business Plan](http://example.com)

California High-Speed Rail Authority Funding Plan, November 3, 2011  
[Funding Plan](http://example.com)

Legislative Analyst’s Office analysis of the High-Speed Rail Authority: The Draft 2012 Business Plan and Funding Plan, November 29, 2011  
[LAO Report](http://example.com)

California High-Speed Rail Peer Review Group, January 3, 2012  
[PRG Report](http://example.com)
Transportation Projects in the News

David M. Schwegel, PE

Roadway

Alaska Way Viaduct (Seattle Washington): Critics say the Washington State Department of Transportation (WSDOT) opted for a 3-mile-long underground SR 99 tunnel to replace the double-decker, cracking, earthquake prone viaduct — far more expensive than a surface street option. Critics also cite Boston Big Dig shortcomings like tunnel leakage and tiles falling. Proponents note Portland Oregon’s success story of “diverting freeways away from downtown and giving back its waterfront.” Seattle’s hilly topography, limited right-of-way, ferry terminal presence, and water body constraints limit surface re-routing options. Therefore, planners opted for an underground option to connect the waterfront community to downtown.

I-5 Delta Shores (Sacramento): The initial Interstate Highway System project in 1939 was dubbed “New Deal Jitterbug Economics,” yet was built anyway. Now the City of Sacramento approved a westbound Consumnes River Blvd extension and a $95 million interchange in the Meadowview Road vicinity south of downtown to serve the 800-acre (large tract of undeveloped land in Sacramento) Delta Shores mixed-use development with 5,200 homes and 1.3 million square feet of retail. The City’s $43 million contribution comes from the temporary diversion of funds from the I-5/Richards Boulevard interchange improvement project north of downtown.

I-95 Travel Plazas (Baltimore Maryland): The Maryland Transportation Authority Board approved the rebuilding and private operation of two travel plazas north of Baltimore (48-year-old Maryland House and 36-year-old Chesapeake House rest stops). Next steps are Maryland Board of Public Works and General Assembly review and approval.

Water

Panama Canal (Central America): Critics dubbed the initial Panama Canal project “impractical” and the Suez Canal “totally impossible to be carried out.” Yet both projects were built anyway. The strike on the next phase of the Panama Canal project has been resolved, and work is resuming on the $5.25 billion widening, doubling capacity. Completion is slated for 2014. How will this impact the West Coast Ports of Vancouver, Seattle, Portland, Oakland, Long Beach, and their associated port and inland traffic congestion issues?

Aviation

Fort Lauderdale Runway (Fort Lauderdale Florida): A new $790 million, 8,000-foot runway is planned for Fort Lauderdale/Hollywood International Airport. This runway is six stories above grade, passing over the Florida East Coast Railway tracks and all lanes of U.S. 1. This runway is 18 years in the making. It has been the most heavily debated topic in the Broward County chambers in the last decade. Groundbreaking took place Monday, January 23, 2012. Operation is expected by September 2014.

LAX: Bradley Termination Expansion: Fog has delayed the proposed expansion by 2 months. The new 2.1-million-square-foot terminal includes 18 new airlines gates (9 capable of serving next generation super-sized jetliners). Projected completion of the west half of the terminal is expected around March 2013.

Transit

BART: In 1966, Berkeley Mayor Johnson dubbed the initial BART project a “billion dollar potential fiasco.” It was built anyway. Now the Santa Clara Valley Transportation Authority is overseeing the $2.3 billion, 10-mile extension between Fremont’s proposed Warm Spring station and the Berryessa District in North San Jose. The Federal Transit Administration and US Department of Transportation approved $900 million in federal funds for the project. The Skanska-Shimmick-Herzog (Riverside) joint venture will oversee the construction. Completion is expected by 2018. This is the first leg of an eventual $6 billion, 16-mile extension to downtown San Jose and Santa Clara. How will this project impact the great debate over whether to run high-speed trains north to San Jose or south to Los Angeles first?

Santa Rosa-San Rafael Rail (Sonoma and Marin Counties): Marin County said “no” to BART south into downtown San Francisco. Now Marin County says “yes” to rail north to Sonoma County. On January 9, 2012, the Sonoma-Marin Area Rail Transit (SMART) District approved a $103 million contract to construct a rail project between a future north Santa Rosa station on Guerneville Road in Sonoma County and a future station in north San Rafael in Marin County. Stacy & Witbeck Inc (Alameda) and Herzog Contracting Corp (St Joseph Missouri) will build the 38.5-mile initial phase from Santa Rosa to the Marin Civic Center. SMART plans to award the second phase contract, ($17-$19 million) between the Marin Civic Center (north San Rafael) and downtown San Rafael, this spring.

High-Speed Rail

Bakersfield to Palmdale:
(http://cahighspeedrail.ca.gov/lib_Bakersfield_Palmdale.aspx): Alignment refinements are taking place through the Edison, Tehachapi, and Antelope Valley sub-segments. A Supplemental Alternatives Analysis Report gets presented to the Authority in February 2012.

Palmdale to Los Angeles:
(http://cahighspeedrail.ca.gov/lib_Palmdale_Los_Angeles.aspx): At least 10 alternatives are being explored through the Acton, Agua Dulce, and Santa Clarita/Sand Canyon sub-segments. A Supplemental Alternatives Analysis gets presented to the Authority in April 2012.

Los Angeles to Anaheim:
(http://cahighspeedrail.ca.gov/lib_Los_Angeles_Anheim.aspx): A “blended” (high-speed train sets on existing tracks) approach will be included in the environmental document while coordination continues with corridor cities, agency partners, and stakeholders in formulating optimum solutions for this section. A Supplemental Alternatives Analysis gets presented to the Authority by the end of 2012.

Direct questions and comments to David M. Schwegel (davidmschwegel@aol.com, 425-466-5677).
Transportation Issues in the News
David M. Schwegel, PE

Federal

Surface Transportation Bill: Lawmakers agreed to a compromise to keep the Federal Aviation Administration (FAA) running with House and Senate passage of an FAA bill forthcoming. Since September 30, 2007, Congress was forced to pass 22 short-term extensions allowing continued operation with the current extension expiring January 31, 2012.

Infrastructure (Obama): In his January 24, 2012 State of the Union Address, Obama called for bringing home troops and using half the salvaged funds to rebuild U.S. infrastructure through fixing roads and ramping up High-Speed Rail (HSR) investment in the hopes of expediting people transport and goods shipments. The other half of the funds goes toward paying down debt. No new legislation has been passed for surface transportation projects since 2005. Funding continued via extensions since 2009 with the current one expiring March 31, 2012. Obama also wants to minimize regulations that impede projects. Currently US transportation projects take on average 11 years from start to finish. The American Society of Civil Engineers (ASCE) sets the price tag for US infrastructure repair at $2.2 trillion. Yet proposed House and Senate highway bills fail to address this funding shortfall.

Keystone Pipeline: Obama denied a permit to construct the Keystone XL Oil Sands Pipeline from Canada to Texas. Proponents of Obama’s decision note America’s need to rely on alternative energy sources. Among the proponents are environmentalists who note the project’s riskiness and potential for increasing global warming. Opponents (75% of Republicans, 69% of conservatives, and 51% of centrists) cite the lost job creation potential in the nation’s current fragile economy.

St. Croix River Bridge Bill: On January 23, 2012, the Senate unanimously passed this bill authorizing a new $690 million bridge across the St. Croix River between Stillwater, Minnesota and Wisconsin, replacing the existing 80-year-old bridge. This favorable vote for the four-lane bridge project follows 15 years of bureaucratic red tape with denied proposals for crossings over this federally protected waterway.

State

Innovation (Governor Brown): In addition to High-Speed Rail (HSR), Brown has a string of other ambitious projects including extensions to the State Water project. His father, Governor Pat Brown invested heavily in universities, freeways, and waterways, helping to stimulate California’s economy. In the 1930’s, critics dubbed the water project as a “fantastic dream” that “will not work.” Specifically Governor Jerry Brown calls for restoring the Sacramento-San Joaquin Delta and overhauling California’s water-delivery system. He also wants California to be a leader in renewable energy development with wind powering much of the HSR system and solar powering transit stations. California Labor Federation Head Art Pulaski notes “the governor’s plan to upgrade our failing infrastructure isn’t optional if we hope to rise above the recession. We simply can’t sustain a vibrant economy if we don’t invest in the infrastructure that supports it.” What role do we transportation professionals play here?

Emissions: California Attorney General Kamala D. Harris and the Sierra Club just announced they are joining the Cleveland National Forest Foundation and the Center for Biological Diversity’s suit against the San Diego Association of Governments (SANDAG) filed in the San Diego Superior Court in November 2011. SANDAG’s 2050 Regional Transportation Plan/Sustainable Communities Strategy was the first to be developed after California passed SB 375 in 2008, requiring such plans to “reduce greenhouse gas emissions via compact land use and transportation planning.” Plaintiffs claim the plan overemphasizes freeway expansions and extensions, and underemphasizes public transit, thereby increasing sprawl and pollution in a region with the nation’s “seventh worst ozone pollution.” Plaintiffs call for improved mitigation of air emissions. Defendants claim SANDAG’s extensive plan production effort included “extensive public involvement, complying with CEQA.” A University of Toronto Economics Department Study notes new freeways in US cities “don’t ease congestion, but instead invite expanded traffic volumes.” The study also notes, in the densest part of US metro areas, vehicle miles traveled increases proportionally to highway lane miles. A major component of SANDAG’s plan is managed lanes (flexible lanes in existing freeway medians) that will be used extensively, but not exclusively (also used by high-occupancy vehicles and toll paying single occupancy vehicles) by bus rapid transit (BRT).

Local

Transit Funding: L.A. Mayor Antonio Villaraigosa traveled to Asia in December 2011 to meet with a Chinese investment group to discuss funding a dozen mass-transit projects in 10 years instead of 30 – out of fear over a US transportation funding stalemate. L.A. County MTA Official David Yale accompanied Villaraigosa on his journey. At the Winter US Conference of Mayors in Washington DC, Group President Villaraigosa noted “You have a Congress that’s just been indifferent to cities.” Brookings Institution Senior Fellow Rob Puentes notes Villaraigosa’s quest for funding beyond US borders is part of an emerging trend. Later this year, Villaraigosa plans to host Asian companies in L.A. to “finalize agreements, secure investments, and create jobs here in Los Angeles.” The US Conference of Mayors also included a meeting with US Secretary of Transportation Ray LaHood to discuss “California’s faltering high-speed rail effort.” Villaraigosa said, “If we don’t build it now, we’ll build it in 20 years and it will cost more.”
The newsletter is a perfect venue for advertising your products and services, as it is circulated nine (9) times a year to approximately 800 ITE recipients all over Southern California. Advertisements are priced reasonably for the benefit of our members.

There is no charge for brief job announcements or course announcements (about 100 words) that would be of interest to our members. Free announcements may be edited or condensed as necessary, though. Only ads that are of direct interest to our members will be accepted. The costs are as follows:

- Sponsorship full page Ad: $300 per month
- Full page Ad: $200 per month
- Half page Ad: $125 per month
- 1/4 page Ad: $75 per month
- 1/8 page (business card) Ad: $50 per month

If you are interested in sponsoring the newsletter, the price is $300. The sponsoring company ad is displayed prominently in the newsletter.

For an additional $50 per month, companies can also include the same advertisement on our section web-page. The web advertisement will be on the page for the entire month.

In addition to Newsletter Sponsorship opportunities, we also have lots of Luncheon Sponsorship Opportunities at $100 per meeting. This is an extraordinary opportunity to educate one of the West Coast’s largest Transportation Engineering communities on your organization. Some other Sections charge $200 or more for lower profile meeting sponsorship opportunities. At $100 per meeting, this is an extraordinary value.

The Newsletter Editors must receive your ad by the 3rd Friday of the month prior to the following month’s newsletter. Thank you in advance for your contribution to the ITE Southern California Section.

Please contact Julia Wu at (562) 283-7882 or juwu@polb.com if you have questions or if you would like to submit an ad or sponsor a newsletter.

On behalf of our Newsletter committee, I, Julia Wu, would like to thank you, all currently-committed sponsors, for your support. Your help in sharing the production costs is what makes the newsletter distribution possible and allows us to increase our student support. I hope the advertisements in our newsletter have contributed to raising your profiles in the local transportation industry. Please note that with the electronic newsletter, the ads are now full-page and in color.

To our prospective sponsors, I encourage you to make your company better known in the community. We have sponsorship vacancies in March and June and after September 2012.
Opportunities for Newsletter Content

David M. Schwegel, PE

The newsletter is also a perfect venue for keeping the membership apprased of a fascinating project you are working on or for educating the membership on a unique development of interest to the local transportation engineering community. Feel free to either provide an article, or if you are too busy to write an article, feel free to submit a fact sheet, and our technical writing team can either write the article for you or co-author the article with you. Typically 500 words and two photos fit on a single page. Articles should be objective and focus on the project, not the firm. This way they are not misconstrued as advertisements. Please submit content to Newsletter Editors Jay Dinkins (jaydinkins@gmail.com) and David Schwegel (davidmschwegel@aol.com) by the deadline. The deadline for the February Newsletter is 11:59 PM on Friday, February 24, 2012. Thank you in advance for your valuable contributions to this great team effort.

Announcements

ITE So Cal Latest Information:

www.itesocal.org

Meeting and Event Photos:

http://picasaweb.google.com/itesocal

We Are Now on Facebook

http://www.facebook.com/home.php?sk=group_174132915945907 or search for “Southern California ITE”

Caltrans District 7 Cycle 10 California Safe Routes to School Grants (SR2S) with a Focus on the Engineering Improvements Toolbox

Presenter: Ryan Snyder, Certified National Safe Routes to School Instructor

When: Wednesday, February 29, 2012

Time: 9:00 am – 11:00 am

Where: Conference Room 1.040A
Caltrans District 7 Headquarters
100 S. Main Street
Los Angeles, CA 90012

Please RSVP by February 22, to Dale Benson at dale_benson@dot.ca.gov

2012 California MUTCD

The 2012 California MUTCD has been adopted by Caltrans as of January 13, 2012 and is available for download from Caltrans website at: http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/ca_mutcd2012.htm.

PROWAG Comment Deadline: Feb 2, 2012

A very productive forum was held by ITE recently regarding traffic signals at roundabouts. Other alternatives such as raised crosswalks, yellow flashing lights, etc., were discussed & may help address some of the pedestrian Xing concerns shown in the video. Additional videos were also shared where drivers not anticipating traffic signals were not complying at the signals/beacons following the roundabouts. This meeting had practitioners, the US Access Board, and other representatives in attendance. It was suggested that maybe a task force work together to help provide some language & that this information might be useful to the board even if after 2/2/12. Please contact Monica Suter (msuter@santa-ana.org) if you want to assist with this effort.

Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way

This article, which appeared on page 10 of the November 2011 Newsletter, was actually written by the Architectural and Transportation Barriers Compliance Board and not Marty Amundson.
The Future City Competition and the Transportation Professional

David M. Schwegel, PE

Triple Pundant (www.FastCoExist.com) ranks “The Top 10 Smart Cities on the Planet” (Boyd Cohen) (Jan 17, 2012) as follows:

1. Vienna, Austria: innovation, regional green city, quality of life, digital governance, Smart Energy Vision 2050, stakeholder consultation processes in carbon reduction, and innovations in transportation and land use planning
2. Toronto, Canada: low carbon economy, Smart Commute Toronto, use of natural gas from landfills to power garbage trucks
3. Paris, France: green city, digital governance, bike share program, and Autolib electric vehicle program
4. New York, USA: IBM Business Analytics Solution Center for business optimization, advanced fire prevention techniques, and questionable tax refund claims identification
5. London, England: congestion tax, robust transit system, and Smart Cities research center at Imperial College, leveraging transport, government, business, academic, and consumer data; launching Europe’s largest free Wi-Fi network
6. Tokyo, Japan: creating smart town in suburbs and partnering with Panasonic, Accenture, and Tokyo Gas to connect energy efficient homes (solar panels, storage batteries, energy efficient appliances) to a smart grid
7. Berlin, Germany: collaborating with Vattenfall, BMW, and other stakeholders to create virtual power plant for electric vehicles
8. Copenhagen, Denmark: committing to carbon neutrality by 2025, 40% of workforce commutes via bicycle
9. Hong Kong, China: experimenting with RFID technology in airport and throughout agriculture supply chain, adopting smart cards for public transit, library/building access, shopping, and car parks
10. Barcelona, Spain: world’s first city to introduce solar thermal ordinance, launched LIVE EV project for adopting electric vehicles and charging infrastructure, and developing a living lab for smart-city innovation

What about cities of the future? The Future City Competition (www.futurecity.org) encourages engineering and project management careers by having 6th to 8th graders design, construct (a scale model), present, and defend futuristic cities before a panel of judges. Each team has a $100 budget. Teams consist of 3 students, a teacher, and a mentor (practicing engineer). Students design their cities using the SimCity 4 computer program, one of the most popular computer games on the market. The 7-minute oral presentation describes innovations like magnetic levitation transport, vertical farms, solar tree and saltwater power generation systems, smart grids, and algae-powered air purification systems. Judges ask questions like: (a) What is one technology your city uses that is not available today? (b) Which engineering field is most critical in the design of your city? (c) What are some risks associated with your alternative energy source?

First Place: Aqua Sol Viente (Hart-Ranson Middle School, Modesto):

Second Place: Sea Sun Harbor (McSwain School, Merced):

Third Place: Simplicity (Saint Anne, Porterville):

Top five finalists in the January 21, 2012 Northern California Region Statewide Finals at UC Davis are as follows:
Fourth Place: Prosperis Semper (Milpitas Christian, Milpitas):

The winner competes in the national competition in Washington DC during National Engineers Week.

Transportation-related special awards include excellence in design of a futuristic transportation system, accessibility design, and use of alternative fuel.

Students start preparing aggressively the prior September for the January competition. Some teams like Prosperous Semper even measured roadway and pathway dimensions in their hometown prior to designing and constructing their models.

As transportation professionals, consider:

1. Serving as a first-round, model, final, or celebrity judge; or even a media liaison in a future Southern California Regional Competition. Television and newspaper media love these kid-focused picturesque competitions that give our profession an opportunity to “toot our horn.”

Use media relations best practices to educate your own communities on transportation innovations.

2. Serving as a team mentor. While demanding work and family schedules may make carving out time for mentorship tricky, mentors find that the opportunity to make a tangible positive difference in the lives of students is extremely valuable and rewarding. Take it from Brian Metzger, a mentor from South Carolina: “I love working with kids. Future City has a great structure for learning; there’s planning, design, computer simulation, writing, hands-on building, teamwork, and presentation – all of the skills a modern engineer needs.”

3. Rebranding the academic perceptions of our profession from one of taking rigorous science, technology, engineering, and mathematics (STEM) courses to one of making a positive tangible difference in the quality of life of our citizens.

4. Getting ITE to sponsor a special transportation planning related award such as excellence in a balanced transportation system.

National Engineers Week is just around the corner. Google it. Find volunteer opportunities. Participate. Let kids know, transportation engineering is cool!

Direct questions and comments to David M. Schwegel (davidmschwegel@aol.com, 425-466-5677).

Fifth Place: M.E.L. “Manufacturing Electricity and Lights (St. Eugene School, Santa Rosa):

West Village: A Mixed-Use Zero Net Energy Community on a College Campus
David M. Schwegel, PE

Welcome to West Village (http://westvillage.ucdavis.edu/) on the UC Davis Campus. With Phase 1 housing for 3,000 students, educational facilities for 2,400 students (Sacramento City College Davis Center, the first community college center on a UC campus, opened January 13, 2012), and 42,500 square feet of retail, it’s the “largest planned zero net energy community in the United States.” The $280 million project is funded through a public-private partnership (PPP) to demonstrate the practicality of zero net energy on a large scale. The design includes building integrated photovoltaics (BIPV) (solar panels integrated into the building structures), parking lot solar shade structures, and a biodigester producing energy from campus waste. Core values include: (1) housing availability with homes and apartments competitively priced and within walking distance of the campus core, (2) environmental responsiveness with reduced car reliance and energy consumption and expanded energy production innovations, and (3) quality of place with open spaces, parks, gardens, pathways, and courtyards encouraging walking and cycling (Davis’ flat topography makes it a cycling mecca).
Developed and implemented in collaboration with West Village Community Partnership LLC, Carmel Partners of San Francisco, and Urban Villages in Denver; the community centers on the Village Square with a fountain, common areas, and full display of the mixed-use character of the village. Village architecture includes single-family homes to the north; and apartments, and mixed-use (residential and retail) buildings in and around the Village Square. Non-residential elements include cell phone stores, print shops, bicycle shops, restaurants, cafes, convenience stores, and spaces for private venture research and development, catering to students and faculty alike. Many retailers, formerly unable to locate near the campus core to “tap into the purchasing power” of the campus, will find a warm welcome with the nearly 43,000 square feet of retail space availing itself in the village.

Energy partners include academic units, corporate partners, and funding agencies. The Institute of Transportation Studies at UC Davis (ITS-Davis) researches emerging transportation issues and conveys such information via conferences, publications, and classes. The UC Davis Lighting Technology Center explores energy-efficient lighting and daylighting technologies. SunPower Corp (San Jose) designed and constructed the 4-megawatt photovoltaic solar-power system powering both the residential and retail facilities. Notably absent in this community are traffic signals. Motorists travel through two roundabouts. Cyclists also have a roundabout.

Transportation professionals are encouraged to study the findings of ITS-Davis regarding emerging transportation trends and the effectiveness of the mixed-use planning in reducing vehicle trips. Note the effectiveness of design innovations including bicycle roundabouts. Promote the use of such communities on other campuses in the hope that tomorrow’s transportation professionals will take their living experience and apply it to metro and suburban city center revitalization and vehicle trip reduction efforts. Consider partnering with ITS-Davis counterparts on other campuses, as we educate the public on the transportation professional’s leadership role in sustainability. Also note the effectiveness of the collaboration of corporate partners in creating innovations such as West Village. Such partners include Chevron Energy Solutions, Davis Energy Group, Pacific Gas & Electric (PG&E), and SunPower Corp among others.

Collaborative funding efforts, including grant funding, are essential for bringing larger-scale innovations to fruition. A total of $7.5 million in grant funding for the West Village Energy Initiative came from the following sources: (1) California Energy Commission’s PIER Renewable-Based Energy Secure Community (RESCO), (2) US Department of Energy (USDOE) Community Renewable Energy Deployment program for the waste-to-renewable-energy component, (3) California Energy Commission funding to match the USDOE grant, and the California Public Utility Commission’s California Solar Initiative.

What campuses within our Section have spaces that can be used for demonstrating the practicality of net energy communities? Solar loses 1 percent efficiency for every 2 degrees above 75 degrees Fahrenheit. Davis has many more 100 degree days than we do. On the other hand, solar is area intensive. Land is more expensive in urban Los Angeles and Orange Counties than rural Yolo County. Space constraints and the cost of real estate land stimulate land use innovations such as: (a) parking structures with BIPV over surface lots with shade structures, and (b) neighborhood electric vehicle (NEV) charging infrastructure and dedicated lanes and pathways in mixed-use communities over full-size automobile use for short-haul trips.

Direct questions and comments to David M. Schwegel (davidmschwegel@aol.com, 425-466-5677).

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**Parking Lot Shade Structures with Solar Panels**

**A Bike Trail Roundabout**

**Village Square**

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ITE Southern California Section

www.itesocal.org
Public Relations and the Transportation Professional
David M. Schwegel, PE

“There’s an engineer behind everything. They don’t get enough credit.”

-Hannah Thibault, 8th grade, McSwain School, SeaSun Harbor, 2nd Place Team at Northern California Region Statewide Finals Future City Competition (January 2012)

“You design the systems my listeners complain about.”

-David Ross, Seattle Radio Commentator, Women's Transportation Seminar (WTS) Gala (February 2004)

We have our work cut out for us. We’re blessed. We and other sections know it. Nor Cal ITE (www.norcalite.org) collaborated with the Endicott Public Relations (PR) firm to revamp their website and redesign their logo. At their January 19, 2012 meeting, Nor Cal ITE served huge cookies with their logo imprinted. Officers encouraged attendees to: (1) distribute Section promotional flyers at their workplaces, client meetings, and public events; and (2) wear their Section t-shirts with pride.

ITE values education.

The June 3, 2011 Sacramento Business Journal offers these 11 PR tips based on interviews with local PR firms:

1. Resonate with your client’s preferred social media tool. Don’t force your preferred tool on them.
2. Promote how you will meet your client’s needs over your own business.
3. Remember that public engagement takes precedence over attractive well-written work products. Yes, quality work products are important, so get them read and acted on, after you have established strong relationships with clients and the public. Build bridges between clients and the public by preparing work products from the perspective of their pain points. Clearly indicate what you what them to do and how they will benefit.
4. Share content that resonates with client’s interests and pain points, not merely information about your products or services.
5. Spend 80% of your time listening, responding, and inquiring, and 20% talking about yourself.
6. Spend about 15 minutes every day on social media such as a blog, tweets, or Facebook or LinkedIn posts.
7. Actively follow others who follow you with an attitude of humility and a passion for lifelong learning.
8. Respond personally and privately to commenting parties.
9. Position yourself as an expert humbly. Use several media types like social media, newspapers, and magazines.
10. Use social media to edify relationships especially among commenting parties who disagree with you. To disagreeing parties, say “I understand where you’re coming from, and your point is well taken.” “Have we thought about...?” Get them to say, “Wow! I haven’t thought about it like that.”
11. Value social media as one of many communication tools, and don’t assume it works for everyone.

ITE So Cal, what can we do?

1. Hold public tours such as of the LAX and John Wayne airport expansions.
2. Share the ITE Journal, Westernite newsletter, and our own Section newsletter with the public by pointing out an aspect that interests them. To my knowledge, we and Washington State are the only sections with monthly newsletters. Collaborate with Washington. How can we get other Sections to use our newsletters as a tool to educate the public on our profession.
3. Testify before authorities at public meetings.
4. Serve at outreach events like the Future City Competition, PopSickle Stick Bridge Building Competition, and Engineering Science and Technology Fairs.
5. Educate elected officials and the public on hot new trends like mixed-use liveable walkable master planned communities and transit-oriented development in and around transit stations.
6. Publish editorials in the Los Angeles Times, Orange County Register, and other publications.
7. Speak at elementary and high school career fairs and college mentor nights.
8. Serve on PR committees for technology alliance events.
9. Hold more joint meetings with organizations like the Women’s Transportation Seminar who focus on the PR and elected official engagement aspects of transportation.
10. Get involved with the Public Relations Society of America. It’s a win-win. They get our expertise. Our expertise gets promoted.
11. Collaborate with chambers of commerce and rotary clubs. Find out their infrastructure pain points. Address them. In June 2010, the US High Speed Rail Association (USHSR) (www.ushsr.com) spoke to Fullerton Rotary Club members about the economic impacts of HSR around stations and the congestion relief benefits for motorists refusing to give up driving.

In 2006, American Society of Civil Engineers (ASCE)/Sacramento was years behind other California metro areas in their Infrastructure Report Card (IRC) project. With limited human and financial resources, they opted for PR consultation and a simple brochure over elaborate printed material. PR efforts included a press conference and gala event at the capitol resulting in a Sacramento Business Journal article and attention from Governor Schwarzeneggger’s office.

Yes PR takes extra time and effort. The Small Business Economic Impact Alliance (SBEIA) (www.sbeia.org) reminds us – “many hands make light work.”

Yes speaking before hostile parties at public meetings requires courage. Is it worth it to change the course of history? California High-Speed Rail Project Regional Manager – Fresno to Bakersfield – Thomas Tracy says, “I wasn’t alive for the construction of the State Water Project or I-80 over the mountains to Reno, but I’m glad they’re done.”


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Social Media and the Transportation Professional
David M. Schwegel, PE

Printed articles are great. Interaction is even better. That’s why we have social media like blogging, Facebook (www.facebook.com) (5 million users), Twitter (www.twitter.com) (2 million users), and LinkedIn (www.linkedin.com) (1 million users). Public Relations (PR) professionals remind us to use them to advance our profession.

Facebook

Get a free Facebook (www.facebook.com) account. Check out our Facebook page (http://www.facebook.com/home.php?sk=group_174132915945907) or search “Southern California ITE.” “Like” it. Comment on it. Direct others to it. Get them to “like” it too. Go to other sites like the California High-Speed Rail Authority (http://www.facebook.com/CaliforniaHighSpeedRail). “Like” it even if you’re not a High-Speed Rail (HSR) fan. It’s a hot topic. Review the comments. “Like” them even if you disagree with them. Provide your own comments even if you disagree with the comments you are commenting on. PR professionals remind us to spend 15 minutes a day on social media. Prepare a two-week Facebook posting schedule. Stick to it. If you’re an HSR advocate, one day, discuss Vision California (www.visioncalifornia.org) and the $10,000 annual household cost savings of living within walking distance of stations vs. remote suburbs. Another day, discuss the “quality productive time” riding transit vs. driving. If they’re compelling and insightful enough, the California High-Speed Rail Authority may even “like” them. Read the concerns of the opposition such as cost, noise, and farmland encroachment. Learn them. Comment on them. An advocate must know how the opposition thinks and lovingly and tactfully address their concerns.

LinkedIn

Get a free LinkedIn (www.linkedin.com) account. Set up a profile with keywords for the transportation engineering profession in general and those of your specialty. Explain who you are, what you do, and who you help. Connect with colleagues both inside and outside of the transportation engineering profession. When connecting, think “help first! Receive later!” Join groups. ITE has one. Does ITE So Cal have one? If not, let’s start one. Do we want more friends and colleagues to actually read and act on our content? Post hot topics like “Is HSR financially feasible for California?” Join other groups like Traffic Engineer/Transportation Planner Network, ASCE, Railgroups, Californians for High-Speed Rail, High-Speed Rail Infrastructure, and others. Weigh in on discussions. Start new ones. Use attention-getting thought-provoking headlines. “What comes first, IOS North or South?” generates discussion on whether the Initial Operating Section (IOS) goes north to San Jose or south to Los Angeles first. Make explanations short enough to fit onto a smart phone screen. Connect with like-minded professionals throughout the world. High-Speed Rail enthusiasts in the US cherish overseas expertise.

Twitter

So you’ve conveyed who you are, what you do, and who you help in your LinkedIn profile. Now condense it to 160 characters (the size of a text message). That’s your Twitter profile. Now brainstorm 140-character statements in a Word document on a given topic. These are your “tweets.” Write lots of tweets. It’s great practice for us detail-oriented engineers. Try summarizing the gist of your engineering reports in tweets. Use them in client meetings and ITE paper presentations. Tweets of a High-Speed Rail enthusiast before an audience with a financial feasibility objection may include: (a) The conservative Business Plan has $16 billion in contingencies and $27.5 billion in inflated costs, (b) Adding HSR infrastructure grew Lille France tourism 15-fold between 1990 and 2003, (c) TGV made a $1.75 billion profit in 2010. Expand on your tweets in Facebook and LinkedIn.

Blogging

Blogs are interactive online articles. Access profession related ones via a free subscription to “ASCE Smart Briefs.” Find out if there’s a “Smart Briefs” subscription available for transportation planners and engineers. Read the articles. Read the comments. ASCE Executive Director Pat Natale commented on the importance of the seamless interconnection of modes at stations in an article on High-Speed Rail feasibility. Referencing Natale’s comment adds credibility to a testimony before the California High-Speed Rail Authority on mode interconnectivity. Get a Word Press platform. Set up a blogging schedule. Stick to it. Write blogs on compelling, relevant, and different topics. Have thought-provoking headlines that invoke comments. These headlines are your sales pitch to get readers to open up and comment on your blog over the hundreds of other headlines they read. Discuss your blogging experience with your colleagues. Formulate “best practices.” Publish them in an upcoming ITE So Cal newsletter.

The economy is changing greatly, especially in the transportation arena. Umpqua Bank CEO Ray Davis reminds us, “The world is watching the US. The US is watching California.” So Cal is one of ITE’s largest sections. California is trying to advance a controversial High-Speed Rail (HSR) project in the “world’s largest untapped HSR market.” Our traffic congestion is among the worst in the nation. The world is watching our posts, discussions, and tweets on these and other hot topics. We’re in the spotlight. Let’s get to work.

Direct comments and questions to David M. Schwegel (davidmschwegel@aol.com, 425-466-5677).
Wireless Sensor Networks — Transforming Transportation

Managing mobility in the 21st century requires a symphony of intelligent transportation systems—all working in accord. Yet worldwide, many roadway agencies still rely on outmoded, and disparate technologies—providing only a narrow view of the big picture—while leaving long-term planning to conjecture.

Until now.

With over 50,000 sensors deployed worldwide, Sensys Networks VDS240 infrastructure-based wireless detection solutions are rapidly replacing costly, maintenance-intensive inductive loop systems, and enabling traffic engineers to install detection precisely where needed—at a fraction of the cost.

Our compact, rugged, wireless sensors—with an unprecedented 10-year battery life—install in minutes, deploy in hours, and consistently outperform all other detection technologies in the world’s most adverse weather and pavement conditions.

With accurate, dependable, real-time data, freeway, arterial, and intersection optimization just got easier. From a single intersection—to an entire city, our flexible, highly scalable universal platform supports all traffic detection applications—with one set of equipment.


Are you getting the most out of your transportation infrastructure? Find out how Sensys Networks’ suite of wireless detection solutions can introduce efficiencies, streamline operations, and save your agency money.

Join the future. Go wireless.
Are Joining Forces to Bring You A Joint Luncheon Meeting You Don’t Want to Miss!!

**SBCAG ITS Plan and Implementation Program**

By

Fred Luna, Program Manager

Santa Barbara County Association of Governments (SBCAG)

To be held on **Tuesday, February 7, 2012 at 11:30 AM**

**FOR RESERVATIONS, please contact:**

Sri Chakravarthy, P.E., T.E.
Secretary-Treasurer for ITE Southern CA

E-mail: sri.chakravarthy@kimley-horn.com

**The Los Robles Greens Golf Course**

299 South Moorpark Road

Thousand Oaks, CA 91361

Phone: (805) 495-6421

$30 with advance reservation *(Before 12:00 p.m., Friday, February 3, 2012)*

$35 at the door, $10 for students w/ ID, Cash or Checks Only

Lunch Menu: Mexican Lunch Buffet

**Directions:**

Los Robles Greens Golf Course is located directly south of the 101 Freeway in Thousand Oaks, CA. Exit the 101 freeway at Moorpark Rd. Go south on Moorpark Rd approx 1/4 mile. Turn right on Rolling Oaks Dr. Continue on Rolling Oaks into golf course parking lot.