

Westernite

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‘Honey, I Shrunk the Bus Travel Time on Route 12!’

Bus Priority at Traffic Signals in Portland

By Peter Koonce, P.E., Kittelson & Associates, Inc. (M) and Bill Kloos, P.E., City of Portland (F)

The City of Portland, in collaboration with Tri-Met (Portland’s regional transit service provider), and the Oregon Department of Transportation (ODOT) have implemented transit signal priority at over 240 intersections on seven transit routes as a part of the Streamline program. The Streamline program is a comprehensive transit priority system that utilizes transit signal priority, an automatic vehicle location system, and improved scheduling in a comprehensive manner to improve service to passengers. The program has resulted in “Smart” buses that can selectively request priority depending on the status of the bus with respect to its schedule. The purpose of the Streamline program is to offer more efficient service on key transit corridors throughout the City.

Signal Controller

The current signal priority project is the result of several years of experimentation with various techniques. The system that has been implemented uses a Model 170 HC11 traffic controller, which is an evolutionary piece of hardware, as part of an eventual upgrade to a 2070-like Advanced Traffic Controller (ATC). The traffic signal controller software used by the City, the Oregon Department of Transportation (ODOT) and most of the neighboring jurisdictions, Wapiti, allows green extension for the bus phase and red truncation for non-bus phases while maintaining coordination. The detection system used for the project was the 3M Opticom system, and an automatic vehicle location (AVL) system is used to control the emitter.

Detection Device Selection

The selection of Opticom units for the project came as a result of the Powell Boulevard Study and discussions with key stakeholders throughout the

Portland-metropolitan area. The Opticom system by 3M was chosen for the following reasons:

- Opticom units are standard in the suburbs for emergency vehicle preemption and this choice makes expansion easy.
- The City of Portland Fire Bureau desires to reach 100% coverage within the City to improve emergency vehicle response times.
- The optical detectors allow flexible range setting.
- The City did not want another piece of hardware that would increase maintenance costs.

Project Description

The first phase of the project involved implementation on eight bus routes. This paper analyzes the Route 12—Barbur Boulevard corridor. This route operates mainly on SW Barbur Boulevard in southwest Portland. It travels through twelve signalized intersections along six

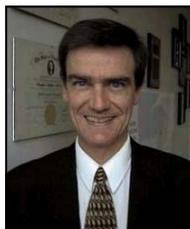
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President’s Message



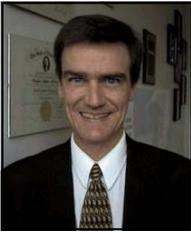
Randy McCourt,
District 6 President

With this edition of *WesternITE*, we are launching a new feature of transportation information sharing called “WesternITE Roundup – knowing is half the battle.” This column will highlight

transportation information from two to three sections per issue, rotating through the entire district in a year. Information in this section will highlight what is going on in a section/state/area regarding our profession that others might find interesting—from big projects to new funding, study findings to new analysis, academic projects to consultant studies, research to innovative products, good seminars or courses to key community activity members might be interested in. This is a wide gambit, but the goal is simple: to provide, in each issue, news you can use regarding current transportation activities and projects of

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Student Chapter Corner



Randy McCourt

With nearly 80 students attending the Seattle Annual Meeting in August, a clear picture of the future of ITE was provided—and it was good. Only two years ago at the 2001 District 6 Annual Meeting in Albuquerque, where 16 students registered,

Rory Grindley declared the “Year of the Student.” At the following annual meeting in Palm Desert, participation soared to nearly 50 students. In 2002, Julie Townsend committed to the “Year of the Student 2,” and we saw the results of their collective vision—nearly 80 students in attendance participating with professionals at the Seattle meeting. At our ITE Leadership meeting in Seattle the question was raised as to how to maintain the involvement in student programs and

what folks have done in the past that has worked. On the District 6 web site is an outstanding new *Student Chapter Best Practices* document (found under “Students/Universities—Student Chapter Resources”). There were some interesting responses at the Leadership Meeting that I would like to share with all the student chapters ranging from guiding statements to specific actions:

- Develop and recruit strong leadership
- Establish good communication between members within the chapter and personal contact with professionals from outside the university
- Provide social activities (free pizza or food were mentioned) with technical programs (participating professionals can help with the pizza!)
- Mix up program/events—change format and type of meetings to keep it interesting

- Provide a focal point activity or activities—community service, group and/or technical projects
- Seek help from local ITE sections and chapters—host joint meetings on campus
- Have a transportation course that requires students attend an ITE section/chapter/district meeting as part of the non-lecture course work
- Work with ITE sections/chapters/district to obtain travel and registration subsidies to meetings (golf tournaments were commonly noted)
- Have consultants and members subsidize lunch costs of any participating students at section and chapter meetings
- Match continuing education activities together with section/chapter activities and meetings

I think if we all take a little time to do just one of these as members this year, we will find even greater rewards ahead in the pursuit of attracting the best and brightest into transportation.

‘What’s the Latest from the International Board, Ray?’

Highlights of the Seattle International Board Meeting

The ITE Strategic Planning Process is in full force. An informal session concerning the drafting of the Financial, Communications, Membership, and Technical Program Plans was conducted. A number of issues were identified that crossed over each of the committees. A game plan was developed to identify specific measures for the 2004 calendar year.

International Budget

The Board made several modifications to the 2003 fiscal year, including authorizing funds from the Professional Development Project Fund for the development of one or more courses; authorization of funds for the Role of Operations to provide Safe, Reliable and Secure Transportation, and authorization of funds for the Latin Initiative to create a Spanish portion of the website including posting all papers from the Mexico Conference in Spanish. In addition, the

Board voted not to spend funds for the Student Chapter Trip Generation and Commissioned Special Studies in 2003 and to defer the expenditure for the College Transportation Programs website until 2004.

Membership dues and meeting registration fees are going to go up. The International Board voted to limit the increase for membership fees, and the registration fees for the Annual Conference and the Spring Technical Conference to no more than 3%.

PTOE registration is almost 1000.

The number of PTOE is at 933 and is expected to exceed 1000 after the next test is given. There has been a 90 percent renewal rate of the PTOE. The TPCB Board presented ITE a check for \$20,000 as an additional payment toward reducing the balance due to ITE on its loan to the TCPB, Inc.

On-line balloting is on its way. The International Board authorized staff to move forward with the implementation of the on-line balloting. The first time it will

be used will be the 2004 International Ballot and the Constitutional Amendment ballot. Once the beta testing is completed, it will be offered to the Districts and Sections to use in 2005. There may be a fee associated with the use of the on-line balloting by Sections or Districts.



Ray Davis,
International
Director

The 2004 ITE

Emphasis Areas have been identified. The Board adopted the following emphasis areas for the 2004 fiscal year:

- Implementation of key actions from individual strategic plans
- Intersection Safety
- Continuing Education
- Public Awareness Outreach
- Operations Initiatives
- Designing for all system users

Miscellaneous Actions taken by the Board

- The 2005 Spring Technical Conference will be held in Las Vegas, Nevada, during the period from

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WesternITE Round-Up

Tips from Around the District

This column kicks off a new feature in WesternITE: Tips from local sections and chapters on items of interest to District 6 members. Tips will include technical traffic/transportation information, how to make your business or government agency work a little better, or how to run your ITE section or chapter more efficiently and effectively and efficiently. Tips will be published on a rotating basis, with each section/chapter having an opportunity to contribute. See Page 12 for a contribution schedule.



Alaska Section

Professional Community and University Meet

Representatives from various engineering societies, including ITE-Alaska, and University of Alaska faculty held an all-day meeting last fall to determine what needs of the professional community could be filled by UA at its campuses in Anchorage, Fairbanks and Juneau. The top recommendations were:

1. Increase the diversity of degree programs and course offerings for working professionals in Anchorage, the most populous city in Alaska.
2. Increase interactions between the universities and industry, to better tailor degree programs to the specific needs of Alaskan industry.
3. Encourage internships at all levels.
4. Increase faculty compensation to match comparable industry levels to attract and retain high-quality professors.

LIDAR Aerial Surveys

LIDAR has made an appearance in Alaska. LIDAR, which stands for Light Detection And Ranging, uses a plane or helicopter mounted laser to measure the earth at a 1 to 3 foot spacing. It is accurate

within 6 inches vertically, and 2 to 5 feet horizontally, depending on flight height. It can penetrate summer foliage, showing both canopy top and ground level, and shows power lines and buildings with great detail. The results are a fully automated, digital elevation model that can be integrated into ERDOS, ArcView, MicroStation, or AutoCAD. It can be cost effective for large reconnaissance projects (150 square miles or more) or multiple small projects.

Asphalt Pavement Rutting Study

An ongoing study by Scott Gartin, Alaska DOT&PF Statewide Pavement Engineer, is focusing on serious rutting problems on Alaska's urban roads. The early results indicate that the rutting depth is directly proportional to the number of cars traveling the lane per day. Studded tire use compounds the problem. Some paving mixes perform better than others, but none are found to acceptably decrease the rate of wearing and rutting on the higher trafficked roadways. The solutions are to decrease the total number of cars, increase the total number of lanes, or rotomill and repair the roads more frequently. So far, the third option seems to be the most practical. The final report should be out in January 2004, on the ADOT&PF web site at www.dot.state.ak.us, World of DOT, Pavement Management Section.

Moose-Vehicle Accidents on Alaska's Rural Highways

State of Alaska highways record the highest number of moose-vehicle collisions in North America. On rural highways, these collisions account for over twenty percent of all motor vehicle accidents. The first step in mitigation efforts is to identify those areas that exhibit the greatest frequency and volume of collisions. Every site is different, requiring a site-specific solution and a level of treatment commensurate with the collision problem. Moose fencing and underpasses have proved an effective mitigation measure, although complex and costly, by channelizing moose migration at specific locations along highways. Vegetation that inhibits the growth of moose forage decreases the attractiveness of the road corridor to moose. Clearing vegetation, slope flattening, delineator backdrops and

continuous illumination improve motorist's ability to see moose. Public awareness programs and warning signs increase awareness of potential moose collisions. A complete report of Moose-Vehicle Accidents on Alaska's Rural Highway, can be found at www.dot.state.ak.us.

Laurie Kozisek, P.E.,
president, ITE Alaska



Arizona Section

Desert Tidbits

- The Southern Arizona ITE Chapter and the University of Arizona ITE Student Chapter held a joint meeting on September 19, 2003, featuring a presentation on Transportation Safety by Professor Simon Washington.
- The award-winning ITE Student Chapter at Montana State University visited Phoenix and Tucson during the first week of November. The Active Members Group of the Arizona Section helped organize tours of traffic and transit control centers, presentations and a happy hour with the Group.
- Once again, the Arizona Section will be a co-sponsor of the 2004 Future City Competition, which where teams of 7th and 8th grade students build futuristic cities using the SimCity software and a scale model. AZITE will provide a special award for the Best Multimodal Transportation System.

Sarah Joshua, P.E.,
Ph.D., Arizona Section
President



‘Honey, I Shrunk The Bus Travel Time on Route 12!’

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miles of roadway, extending from downtown Portland to the City of Tigard. The extent of the signal priority project is within the city limits of Portland and our analysis has focused on the travel time within the City of Portland. The route provides a good candidate for signal priority because the travel speeds along SW Barbur Boulevard reach 40 to 45 mph in some sections.

All of the buses within the Tri-Met fleet (775 as of October, 2001) have had Opticom emitters installed on the buses. Six other bus routes have been retrofitted with Opticom equipment. When the project is complete, nearly 300 intersections will have Opticom equipment for transit priority and emergency vehicle preemption. This project nearly doubled the amount of intersections that have emergency vehicle preemption equipment installed.

System Components

The signal priority system has three basic components. The bus must be detected by the traffic signal (the bus detection system component), and the traffic signal must accept the request for priority (the bus priority logic component). In addition, an automatic vehicle location system component is used to make informed decisions regarding the priority

Note: This figure assumes a lateness threshold of 0 to 30 seconds, which differs from the threshold of 30 to 90 seconds described in the article.

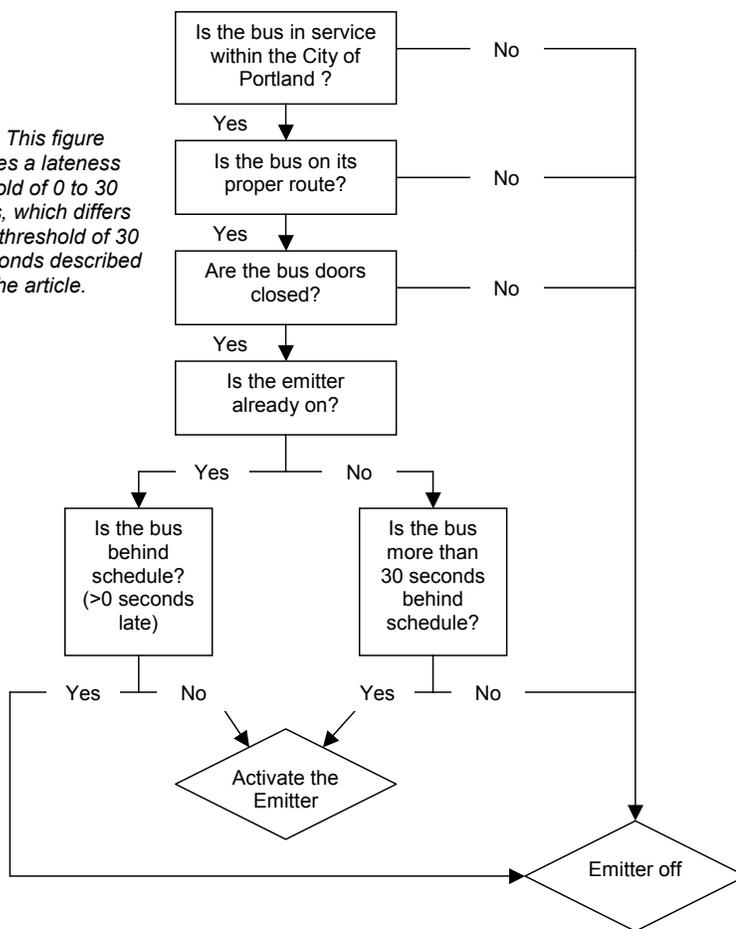


Figure 1: Emitter Activation Flowchart

request.

Automatic Vehicle Location System

Tri-Met has been using Automatic Vehicle Location (AVL) to monitor and control its bus operations since 1998. The AVL system uses on-board GPS receivers to monitor the buses via the Bus Dispatch System (BDS). The BDS system, developed by Orbital Sciences Corporation, is connected to the bus' on-board computer, which contains the route and schedule information. Integration of this information allows the bus to determine schedule status on a real-time basis. This permits the Smart Bus concept, which will only allow the bus to activate the Opticom emitter when the bus is behind schedule and if certain other criteria are met. These other criteria include the following:

- Location of the bus in the metropolitan area (currently only signals with the City of Portland are activated and the emitter does not operate outside of the City boundary),
- Determination if the bus is in service (buses that are returning to the bus garage are not granted priority because

they are not serving riders),

- Determination if the bus is ready to proceed along the route (this is determined by a toggle activated by the door opening, once the door is open the priority emitter is turned off.)

Bus Detection System

The challenge for implementing the concept successfully is the detection system, which must place a call at an appropriate time in order to be effective. A call placed too late during the bus phase can result in a missed opportunity. A call placed too soon can result in the provision of green time that cannot be used effectively.

The Opticom system relies on an infrared strobe light to communicate the bus' approach to the intersection. An emitter mounted on the bus is activated to send an encoded message to the traffic signal. A detector located at the intersection receives the signal and converts it to a message to the controller. A phase selector within the controller cabinet makes the request for priority within the traffic signal controller and also logs the

About the Authors:

Peter J. V. Koonce, P.E., is a Senior Engineer with Kittelson & Associates, Inc. and has been project manager for the City of Portland Transit Signal Priority Project. He is a Member of ITE and serves as the Technical Editor of *WesternITE*.



Bill Kloos, P.E., is the City of Portland's Signals and Street Lighting Manager, a position he has held since 1984. He is a Fellow of ITE and a past president of the Oregon Section.



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information within the unit.

The Opticom system is limited in the data that can be transmitted from the bus to the traffic signal via an emitter and an optical detector. It can provide two types of information: an immediate request for service, and a bus identification number. The timing of messages can be controlled in two ways. First, the bus' Automatic Vehicle Location system can control whether or not the emitter sends any message at all. Second, the detection range setting of the Opticom receiver can also control the timing of the request. Setting the distance for detection range provides an opportunity to increase the usefulness of the priority request by requesting priority at a location that increases the likelihood that the bus will progress through the signal during the priority call. Other criteria that control the emitter within the Smart Bus concept are described in Figure 1. The Smart Bus only activates the emitter when the criteria are met.

Traffic Signal Timing

The Wapiti Microsystems traffic signal software provides a range of priority and preemption options as well as a range of recovery options to reduce bus delays. The strategies are in place throughout the day while buses operate on the system. Priority can be requested on any of the legs of the intersection. The maximum extension is constrained by intersection elements, but ranges from 0 to 40 seconds. The truncation also is dependent upon the configuration of the intersection. Table 1 summarizes some of the limitations associated with the signal timing as it relates to bus operations.

During this implementation, red truncation and green extension are utilized to provide priority. The basic concept of green extension and red truncation is generally well understood. To maintain coordination, the phase length changes must be implemented within the constraints of the overall cycle length; considerations include minimum walk time, flashing don't walk time, and minimum vehicle green time.

Priority Decision Logic

The time the call is entered dictates the response of the controller. The controller logic determines whether to use green extension (extend a current green indication for the bus) or red truncation (shorten other non-bus phases), depending on whether the controller is in the bus or non-bus phase, respectively.

Table 1: Traffic Signal Timing Considerations for Signal Priority

Parameter	Limitation	Comment
Pedestrian Detection	Lack of pedestrian detection (push buttons for actuation) requires the opposing pedestrian phase to time every cycle	Presence of pedestrian detection increases the potential responsiveness of the intersection to serve transit
Pedestrian Timing	Time for Flashing Don't Walk cannot be reduced in any case	Pedestrian detection reduces the need to recall pedestrian phases each cycle, thereby improving the responsiveness to transit
Multi-phase intersections	Phase skipping is not allowed in the State of Oregon, thus minimum vehicle times and clearance times must be considered for all phases (Legislative limitation)	Additional phases at intersections increase the amount of required time for service
Cycle lengths	Low cycle lengths reduce the flexibility of the engineer to extend the timing provided to the bus, although may provide better responsiveness overall	The tradeoff between flexibility and efficiency at the intersections has been continually discussed; the consensus is that lower cycle length typically improves bus operations

Results

The first part of the evaluation presents the effectiveness of signal priority in terms of overall bus travel time savings along corridor. This measure of effectiveness was collected for all buses that operated within the corridor throughout the four-week study period. The a.m. peak and p.m. peak trips were separated for this analysis. Table 2 presents travel time and coefficient of variability of travel time (as a percentage of travel time). The outbound portion of the travel shows a significant improvement in travel time in the p.m. direction.

The second and more important review of the signal priority in this implementation is the evaluation of travel time change associated with buses that were late enough to be granted priority throughout their trip, i.e. more than 90 seconds late (at the beginning) throughout the corridor. From the AVL data, it was determined that priority was requested for

the entire trip on less than 40 percent of the trips studied.

This analysis shows that a two- to three-minute reduction in travel time has been obtained from the transit signal priority application on Barbur Boulevard, which is an 8% to 11% reduction in travel time during the P.M. peak hour. During periods of lower overall travel time, the improvement to travel time is less significant. The largest improvement in both the outbound trips cases is the reduction in travel time variability, which reaches 19% in the A.M. peak hour. The trip travel time distribution is clearly exhibited in Figure 2 (next page), which displays the run time distribution for the entire route from start to finish. Table 3 represented only the travel time portion within the City of Portland's boundaries. This reduced travel time variability can result in improved on-time performance and reliability.

Table 2: Bus Travel Time Summary (All Trips)

		TSP On		TSP Off		Differences	
		average travel time	variability	average travel time	variability	average travel time	variability
Direction	peak	(min)	(%)	(min)	(%)	(min)	(%)
Outbound	AM	19.7	10.6	20.1	25.5	0.4	14.9
Outbound	PM	24.2	10.2	27.4	26.3	3.1	16.1
Inbound	AM	22.7	8.6	23.1	10.8	0.5	2.2
Inbound	PM	22.1	9.3	23.2	16.6	1.1	7.3

Table 3: Bus Travel Time Summary (Late Trips Only)

		TSP On		TSP Off		Differences	
		average travel time	variability	average travel time	variability	average travel time	variability
Direction	peak	(min)	(%)	(min)	(%)	(min)	(%)
Outbound	AM	20.2	10.2	20.8	29.3	0.6	19.2
Outbound	PM	25.6	9.6	28.8	26.4	3.2	16.7
Inbound	AM	22.8	7.3	23.3	10.1	0.4	2.8
Inbound	PM	22.2	9.2	24.3	18.6	2.1	9.4

Lessons Learned

There were several lessons learned as a result of this project. Some of the key items that were taken away by the project team included the following:

1. AVL Data from transit vehicles can be used effectively to determine the impact of signal priority and other transit preferential treatments. Past studies of this magnitude required a substantial amount of effort in the data collection stage. The use of AVL information not only provides data for analysis, but also for monitoring conditions in the field on an ongoing basis. Similar data sharing opportunities with emergency services and others provide an opportunity to increase the effectiveness of our transportation system.

2. The effectiveness of the signal priority project is a function of the existing signal delay on the corridor. The existing operation of the Barbur Boulevard traffic signals was fairly snappy and delay associated with access to the transit center had already been dealt with by another project (a special bus only phase at the entrance). Additional improvements could be made along the entire route to further reduce the travel time variability which, if scheduled properly, can be used to reduce the amount of service necessary without increasing headways.

3. Signal priority provides an opportunity to benefit transit vehicles, provided all parties are agreeable to a policy that focuses on the movement of people rather than vehicles. It also provides an opportunity to work amongst varying agencies, which can result in dialogue regarding other transportation opportunities. The opportunities for

improvement may be small (30 seconds at some intersections, less than that at others), but when added up over a corridor, do make a noticeable difference.

Conclusion

Signal priority offers the promise to improve schedule reliability and reduce travel time through traffic signals. The use of the AVL system in conjunction with the signal priority can reduce the number of requests to the traffic signal, which means the aggressiveness of the signal timing settings can be increased, while still improving the effectiveness of the system for buses. Finally, one of the obstacles to implementation of signal priority is older traffic signal controllers which, in some cases, may not distinguish between a priority call from a bus and a preemption call from an emergency vehicle. This project has shown that with minor software modifications, these controllers can operate effectively if the signal controller can make the distinction. On the other hand, the traffic signal controller cannot, on its own, tell if the bus is late and thus should be

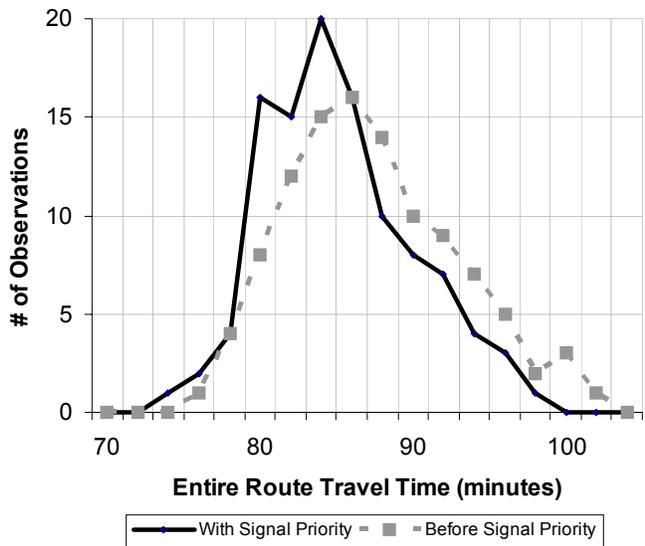


Figure 2: Run Time Distribution—PM Peak Trips

granted priority, which is why the AVL system is recommended.

References

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 Kloos, W.C., A.R. Danaher, K.M. Hunter-Zaworski, "Bus Priority at Traffic Signals in Portland: The Powell Boulevard Pilot Project," ITE 1994 Compendium of Technical Papers, pp. 420-424.
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Call for Abstracts for 2004 District 6 Annual Meeting in Sacramento



The Technical Committee for the 2004 ITE District 6 Annual Meeting is accepting abstracts and proposals for special sessions for consideration for the meeting Technical Program. Abstracts are welcome on any of the following transportation topic areas:

- Traffic Engineering
- Transportation Planning
- Mobility/Operations

- Safety
- Pedestrian/Bicycle Planning/Design
- Travel Models and Microsimulation
- Transit Planning/Design/Operations
- Livability/Community Issues
- Advanced Vehicles/Emission Reduction Strategies

Abstracts are due Friday, December 5, 2003. More information is available at www.westernite.org.

Submittals, questions, and comments should be directed to the Technical Committee Chair:

Bruce Griesenbeck
 DKS Associates
 8950 Cal Center Drive, Suite 340
 Sacramento, CA 95826
 (916) 368-2000
bag@dksassociates.com

Legislative Update



Walt Stringer,
District 6 Legislative
Committee Chair

In California, state budgetary matters have been continuing as previously described, with the recent election of a new governor and devastating wildfires in Southern California adding to the current climate of uncertainty. The wildfires are consuming

unanticipated state resources and will likely produce calls for upgrades to state-funded fire/disaster recovery facilities. The Governor-elect has yet to take office or issue any major policy positions [as of the beginning of November—Ed.], but has commissioned an audit of state finances and made one campaign-trail statement

that, at first glance, appeared unfavorable to transit funding. At the Federal level, the Senate in late October passed their version of the Appropriations Act (S1589), which appears to maintain and, in a few areas, increase federal funding for transportation programs, including a new internet-based joint procurement arrangement for equipment such as buses (the purchase pooling pilot program). In early November a House-Senate Conference Committee is expected to meet and resolve differences in the bills passed by the two houses, and Continuing Resolutions are in place to continue funding pending a final authorized budget. The Highway portion of TEA-21 (\$255B over 6 years) may be reauthorized as a separate bill (S1702) and is expected to be discussed in early 2004, and ITE members can follow



progress at www.thomas.loc.gov (enter S. 1072). Finally, the RIDE 21 Bill appears to be stalled for the remainder of this year's session. Have a safe and happy holiday season and for those ITE members in states with limited legislative sessions starting in January (basically everywhere except California), I always appreciate receipt of reports from District states, which you can send to wstringer@nctd.org. Please help keep District 6 informed through your updates and submittals.

New Version of Synchro Shipping Trafficware®

Curved Links, Simulating Roundabouts, Right-turn Islands and New ICU Standards Improve Newest Version

Trafficware Corporation has released Synchro plus SimTraffic® 6, a software suite providing a complete solution for optimizing and modeling urban traffic networks. The suite comprises Synchro, a signal timing and analysis program; and SimTraffic, an easy-to-use, microscopic simulation and animation package. Using Synchro plus SimTraffic, traffic professionals can analyze capacity and timing optimization as well as simulate, check and fine tune traffic signal operations. The most important features and enhancements to Synchro plus SimTraffic 6 were developed along two key themes, the first being function-specific enhancements most requested by our customers, the second being improved modeling of real world traffic conditions. New features and enhancements include:

- **Curved links:** Synchro and SimTraffic will now support curved links. Curved links add increased

flexibility to accurately model complex networks.

- **Queue interactions analysis and optimization:** Synchro 6 now includes a term for Queue Interaction Delay. The queue interaction analysis determines additional delays caused by starvation, spillback, and storage length blocking. Queue Delay is an integral part of the optimization objective in Synchro so this will be directly considered during optimizations.
- **Improved Intersection Capacity Utilization (ICU) modeling:** Includes improved modeling of shared left-through lanes and an ICU method for determining the true capacity of diamond interchanges.
- **Right-turn islands:** Synchro and SimTraffic now support right-turn islands. The user will be able to enter whether the right turn is channelized, and if so, the curb radius and number of add lanes.
- **Simulated roundabouts:** SimTraffic now includes detailed modeling for roundabouts. SimTraffic is the only American model to perform micro-

simulation of roundabouts.

SimTraffic can simulate single and multilane roundabouts with multilane entries and exits. Entry control types include Stop, Yield, or Merge. Right turn slip lanes, and pedestrians across the links are also modeled.

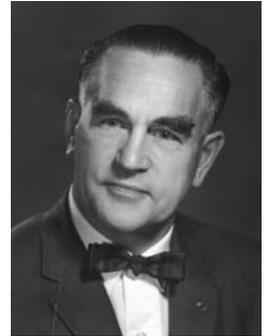
- **Multiple-run recording:** SimTraffic now includes an option to record multiple runs with different random number seeds. Reports will allow the user to summarize the average of the selected number of runs.

For more information regarding the technical specifications, additional features and benefits of Synchro plus SimTraffic 6, visit <http://www.trafficware.com/>

Pricing and Availability

The suggested retail price for Synchro plus SimTraffic 6 is \$3099.00. Synchro plus SimTraffic 6 is available now directly from Trafficware by visiting our website or by calling 510-526-5189 m-f, 7:30 a.m. to 4:30 p.m. PST. Upgrade pricing available.

Ross Shoaf, Former ITE International President



SHOAF, Ross Taylor, of San Francisco, CA, died peacefully on November 4, 2003, of natural causes, with his family at his bedside. He was 95 years old. A native San Franciscan, born on June 10, 1908, he was the son of the late Prentice and Mildred Shoaf. As a young man, Ross was an active member of the Eureka Valley Promotion Association alongside his father. A graduate of Lick-Wilmerding High School in San Francisco, Ross received his civil engineering degree in 1931 from the University of California, Berkeley, where he also excelled on the Cal Wrestling team. He attended the San Francisco School of Fine Arts to be near his future wife, Beth Harvey from Canada. They were married in 1934 and spent their first years in a converted "chicken coop" on Telegraph Hill, before returning to live in his family home in Eureka Valley for close to 40 years.

Ross attended Harvard Business School and also Yale Traffic School. He served for two years in France during World War II as a civilian traffic engineer attached to the military helping to keep men and equipment moving through war-torn Europe. He was appointed City Traffic Engineer of San Francisco in 1949 and was instrumental in establishing the 49-mile Scenic Drive and many major

thoroughfares in the City. He completed his career in 1972 as the Assistant City Engineer of San Francisco, at which point he was elected and served as International President of ITE. In addition to serving as International President of ITE, Ross was Past President of the San Francisco Bay Area Section, Past President of District 6, International Director, recipient of the Burton M. Marsh Award, and Honorary Member. As ITE President, he undertook a precedent-setting, year-long 30,000 mile "grass roots" tour, meeting with most of the individual ITE Chapters in the US, Canada and Mexico, while traveling in his motor home with Beth. He also wrote an ongoing column for the ITE Journal. Shortly after retiring from the City of San Francisco, Ross joined the International Executive Service Corps, spending four months in Taiwan on behalf of the U.S. government to assess the traffic problems and needs in the city of Taipei.

In their younger years, Ross and Beth were energetic members of the Sons and Daughters of the Spanish American War Veterans and participated for years in organizing and performing in plays and vaudeville shows for veterans and families in San Francisco and Yountville. Ross was also a creative graphic artist who lent his talent to many public and social organizational functions, including

designing and editing the monthly dinner-dance newsletter for the Franciscan Park Social Club in Daly City. Ross traveled extensively both in the US and abroad, often combining his joy of traveling with years of genealogical research into his and his wife's family tree. His last two years were spent together with his wife back in San Francisco at Coventry Park. He will be fondly remembered for his ever-present dancing ability... once a hooper, always a hooper!

Ross is survived by his loving wife of 69 years Beth, his son Ross and daughter-in-law Darlene, son Scott and daughter-in-law Rebecca, and daughter Susie Shoaf. He is also survived by grandchildren David, Brett and Jenifer, granddaughter-in-law Laurel, and by five great-granddaughters. In lieu of flowers, the family would prefer donations in memory of Ross to U.C. Berkeley, College of Engineering, Berkeley, CA 94720, 510-642-2487, for the Femineers Scholarship Endowment Fund.

Contributed by Susie Shoaf and Glenn Grigg

In Memory of Joe Perone

Many of you may have had the opportunity to get to know one of our active members from Australia, and former District 6 member, Joe Perone. Joe over the past decade has been a frequent attendee at ITE Annual Meetings, a past president of the Australia/New Zealand Section, and along with Andy O'Brien formed a team that made the presentation to the Board that resulted in the selection of Melbourne as the site of the Institute's 2005 Annual Meeting.

Unfortunately, Joe recently passed away. Joe leaves his wife and three children in Australia and his extended family in New Jersey and elsewhere in the United States. Those of us who knew Joe will remember his sense of humor, commitment to the Institute, and his adoption of Australia as his home. We will be most sad that he was unable to seek assistance in his time of need to get him through a most troubling time in his life. His death at 53 deprives him of the enjoyment of his children, the opportunity

to continue to contribute to his chosen profession, and us of a friend to continue to work with and enjoy the fruits of life. We will miss Joe.

Written by Tom Brahms, ITE Executive Director; contributed by Nazir Lalani, ITE International Past President



Section and Chapter Activities



Hawaii Section

May Meeting

At the May 15, 2003 joint dinner meeting with ASCE, Rodney Haraga, Hawaii DOT Director, presented short-term goals and long-range plans for the Airports, Harbors and Highways Division.

For the Harbors Division, new cruise ships will require rehabilitation of Piers 1 and 2 at Aloha Tower. Also, improvements are planned for Nawiliwili, Hilo and Kahului Harbors. An intra-island ferry is being planned for commuters on Oahu. The State DOT is also considering proposals for inter-island ferry that would carry about 900 passengers and 200 cars; possible one-way fees between Maui and Oahu are \$65 for passengers and \$90 for vehicles. A \$17 million fishing village will open in Honolulu Harbor in April 2004; it will have an open fish market with auctions in the early morning.

For the Highways Division, the draft version of the new federal transportation legislation, called "SAFETEA," is being reviewed. Currently, it proposes to spend about \$247 billion on highway projects across the nation in the next six years. Hawaii's share of these funds would start at \$134 million and increase to \$162 million, or a total of \$905 million for the State of Hawaii over a six-year period. Mr. Haraga indicated that Hawaii would be asking legislators for greater funding, especially for traffic mitigation.

The Nimitz Highway contraflow four-month demonstration program will begin in August or September, 2003. The Waimalu Bridge widening in the Pearl City area is going out to bid soon. Major Neighbor Island projects include Kapaa Bypass on Kauai, Mokulele Highway widening on Maui (which is already under construction) and Queen Kaahumanu Highway widening from two to four lanes on the Big Island. The North-South Road in Ewa, Oahu will be constructed, along with the widening of Fort Weaver Road from four to six lanes. In August or

September 2003, the Highways Division plans to start freeway patrols to remove accidents or stalled vehicles from the travel lanes on the State highway system during weekday daylight hours.

Internally, the DOT is looking at developing Project Status Reports (PSR) to promote accountability among internal DOT staff and the private sector consultants and contractors. Eventually the DOT will begin to pursue liquidated damages to keep projects on schedule. The PSR's will be placed on the DOT website for easy access by the public. Construction management practices and inspections are also being reviewed.

For the Airports Division, there will be two new gates at Aloha and Hawaiian Airlines at Honolulu International Airport (HIA) as well as new checkpoints and new Wikiwiki buses. The old HIA Bank of Hawaii parking lot will be converted to a 30-minute waiting zone with concessionaires for motorists waiting to pick-up arriving passengers. For Kahului Airport, a new check-in area will be established; a new cargo building and alien species building will be constructed, and the runway will be extended for safety reasons. There will be general rehabilitation of Hilo Airport to fix leaky roofs and the jetways affected by acid rain. For the Lihue Airport, a new baggage handling area is planned. Security practices and management at all airports are being examined to determine how to systematized procedures at all airports, yet still be friendly to passengers.

June Meeting

At the June 17, 2003 Section meeting, Mr. Rick Stack of A&B Properties, Inc. discussed A&B's current and future developments. A&B Properties activities include land stewardship, planning and entitlement, development, acquisitions and investments as well as portfolio management and sales. A&B owns 90,580 acres in Hawaii and 210 acres on the mainland.

Active Maui projects include the Maui Business Park, Triangle Square and Kahului Airport Hotel in Kahului, and The Vintage, The Summit and Fairway Shops in Kaanapali. On Oahu, A&B is currently developing the Kai Lani residential project in Ko Olina, a commercial project in the Royal Kunia area, and the Lanikea condominium in Waikiki. On the Big Island, they have the HoloHolo Ku

residential project near Waimea town. On Kauai, A&B is modifying their plans for Kukui Ula development and expanding commercial uses via the Port Allen Marina Center. In Valencia, California, A&B initiated the construction of the Westridge Executive Plaza in May 2003. Several long-term Maui projects are in the planning and entitlement stage, including subsequent phases of the Maui Business Park, Haliimaile Subdivision, Maalaea Village master planned community and other projects near Spreckelsville, Paia and Hamakuapoko.

Mr. Stack indicated that A&B prefers its investments to have a Hawaii focus in various types of office, retail, industrial and residential land uses, but does diversify with mainland properties. A&B's investments tend to focus on near-term or immediate earnings impact and they like to have an active role in the management of their properties. Current A&B Oahu investments involve the 1100 Alakea office building and the Hokua residential condominium mauka of Ala Moana Beach Park.

July Meeting

The ITE Hawaii Section Annual Meeting was held on July 3, 2003 at the Maple Garden Restaurant. Ray Davis, International Director for District 6, was the speaker; he provided a summary of the ongoing activities at the International and District 6 levels of ITE. In addition, Mr. Davis installed the new 2003-2004 Hawaii Section officers:

- President: Cathy Leong
- Vice President: Susan Uejo
- Secretary: Matthew Alonzo
- Treasurer: Fred Smoot
- Past President: Richelle Suzuki

For Year 2003, ITE International emphasis areas are the role of traffic operation in addressing congestion, traffic signal timing, emergency response and incident management, dissemination of safety research findings and best practices, transportation role's in successful communities, workforce development, reauthorization of federal transportation legislation (SAFETEA), membership services and growth, and implementation of ITE's strategic plan. There were 912 PTOEs as of February 2003, and this certification is gaining acceptance as a preferred qualification in some States.

Mr. Davis reviewed the District 6 officers and committee members and summarized the support services to the local Sections and Student Chapters. He noted that several District 6 members are actively chairing ITE's technical councils and encouraged the Hawaii Section members to become more active in ITE.

UH Student Wins ITE District 6 Best Student Paper Award

UH Department of Civil and Environmental Engineering Ph.D. candidate Lin Zhang participated in, and won, the annual student paper contest of District 6 of the Institute of Transportation Engineers. Mr. Zhang's paper is titled "Freeway Travel Time Estimation: Case Study in Honolulu" and is based on the premise that reliable travel time estimation is necessary for congestion management systems and advanced traveler information systems. Simultaneous travel time, traffic volume and speed data from a congested 5-mile segment on the westbound H-1 Freeway in Honolulu were used to examine the travel time forecasting ability of regression, continuous and segmented time series models.

Mr. Zhang was awarded a cash prize of \$500, air travel expenses (up to \$500), hotel accommodations, and registration fees to present his paper at this year's Annual ITE Meeting in Seattle, Washington during August 24-27, 2003.



*Susan Uejo,
Vice President*



Border Section

September Meeting

The California Border Section began another year with a monthly luncheon meeting at the Handlery Hotel in San Diego. At this meeting, Craig Scott from SANDAG gave us an update on the Transnet funding initiative that will be put before San Diego County voters tentatively in November of 2004. This ballot initiative would reauthorize the existing Transnet sales tax for another 30 years, in order to

provide continuing funding for San Diego transportation improvements.

October Meeting

The October luncheon meeting was a joint meeting with the Women's Transportation Seminar (WTS). These meetings are always a lot of fun and have a great turn out. The speaker for this meeting was Bob Leiter, from SANDAG, who updated us on SANDAG's land use and transportation planning programs. The meeting itself was a great opportunity for mingling and networking between the WTS and ITE members. The California Border Section thanks WTS for the opportunity to host joint meetings, and we look forward to next year's meeting.

Section Happenings

The California Border Section has formed a Highway Capacity Task Force, headed by Erik Ruehr of VRPA Technologies. The purpose of this task force is to determine the state of the practice of traffic simulation software in the San Diego region, with the ultimate goal of presenting a white paper describing the regional applicability of various simulation models. This task force grew out of the technical session in June 2003, which was also led by Erik Ruehr. Erik is on the TRB's Highway Capacity Manual committee, and took the lead in getting feedback from San Diego-area traffic engineers as to what they liked and disliked about the HCM 2000.

Our Chapter President, Ralph Leyva, underwent a successful angioplasty surgery on October 1st. Ralph could not attend the October 2nd luncheon meeting, for he was home resting on doctor's orders. The surgery went well, and Ralph is doing fine. I'm sure we can expect to see Ralph back in action on the dance floor at this year's holiday party. Which reminds me...

Upcoming Events

The Holiday Party will be Friday, December 5th, at the Hyatt Islandia Resort in Mission Bay. Special room rates are available, so make sure to sign up soon. We hope that our friends from the Southern California Section and throughout District 6 can make it. San Diego is a beautiful place almost anytime of the year, so feel free to join us in our rockin' holiday celebration! For more information on the holiday party, or anything else you've read in this report, please send an email to: sam_morrissey@urscorp.com, or call me at 619.294.9400.

- Dance
- January: North San Diego County
- February: San Diego
- March: Joint Meeting with the Southern California Section
- April: San Diego
- May: Golf Tournament



*Sam Morrissey,
Secretary*

Washington State Section

September Meeting

Seattle's beautiful summer stayed long enough to allow 74



Washington Section ITE members to enjoy their September 9 luncheon meeting in perfect weather. The large group basked in the view of the city from Salty's Restaurant on Alki Point. Members were also basking in the pride of accomplishment for successfully hosting the ITE 2003 Annual Meeting and Exhibit two weeks earlier.

Incoming ITE Washington Section President Gary Costa (City of Issaquah) gave thanks to the new volunteer committee members and briefly outlined what looks to be a great upcoming year for the organization. He urged members to keep posted on events and information through our web site.

Mr. Jeff Webber (Transpo Group) was acknowledged as the Chairman of the International Meeting's Local Arrangements Committee that keyed the successes of the Annual Meeting. Jeff shared his accolades by highlighting the work of other LAC members. It was noted that the 2003 Annual Meeting effort spanned a period of over seven years.

Attention Scribes: Publication Deadline

The deadline for submitting Scribe reports is the last day of the odd-numbered month prior to the date of the issue. For example, Scribe reports are due by March 31st for publication in the May-June issue.

Perhaps because it was at last over, the work seemed well worth the tremendous investment of time and energy. The LAC was proud that 400 of the 2,300 participants were from the State of Washington, that there were 80 students in attendance, and that the local Section sponsored registration for 13 non-transportation attendees. All involved with this effort should share considerable pride in their accomplishment.

Attendees were very happy to welcome the new District 6 President, Randy McCourt (DKS Associates). Randy warmly recognized Past President Rory Grindley for his accomplishments in the District, particularly with his initiative with Student Chapters. He then amazed the group with his report "Expanding Our Profession—Action Plan for 2004," a large slate of upcoming District endeavors. The Action Plan [covered in the last issue of *WesternITE—Ed.*] included 12 objectives covering member services, technical knowledge, professional development, communications, and membership. Gary Costa outlined some of the local efforts planned to help implement portions of the District 6 Action Plan in the Washington Section, with endeavors such as student mentoring through a new "adopt a student" program and regular meetings with the local Student Chapter.

Chapter Vice-President Torsten Lineau (HDR Engineering) introduced the day's technical presentations. A status report on the developing Seattle Monorail Project was followed by a presentation on the grass roots effort to expand the monorail system beyond Seattle by the Citizens for King County Monorail. Both presentations, having been well honed in front of several previous gatherings, were clear and forthright. Project need was the first point driven home by project representative John Slavin. His statistics demonstrated that Seattle has become so congested that the area is losing its economic competitiveness to other regions. While other cities have been developing effective transit, Seattle has been building neither new highways nor effective transit. We are suffering greatly in our own choking transportation congestion. He noted that low income families are particularly hard-hit by transportation costs. It was estimated that the poorest 20% of Seattle's population spends 40% of their family income on transportation costs.

A broad-based coalition of supporters succeeded in bringing the monorail expansion project forward to address these transportation deficiencies. The project has been funded at \$1.749B with a car registration tax (a 1.4% MVET) for Seattle

residents. Construction on the 3-time voter-approved Seattle Popular Monorail Authority (Seattle Monorail Project)'s first phase, the 14-mile Green Line, is scheduled to begin in 2005. Sections of the Green Line will be open for operation in 2007, while the entire line will be open in 2009. The draft EIS is presently being circulated for public comment. It is forecast to carry 69,000 ADT on an elevated route with electric stock on 4-minute headways. The financial goal is to break even in operating costs by 2020. More information can be gained by visiting www.elevated.org.

The King County Monorail effort is a grassroots endeavor to build upon the Seattle project. If this new and independent measure qualifies for a popular vote, it would propose to establish an authority similar to that created within the City of Seattle. The effort intends to eventually expand the monorail system to suburban communities. More information can be gained by visiting www.kingcountymonorail.org.



Dave Alm, Scribe

'What's the Latest from the International Board, Ray?'

(Continued from page 2)

March 1 to April 30.

- The Spring Conferences are going to have more focused topics and will have less activities associated with them.
- A new List Serve is being created for District Administrators to facilitate better discussions regarding administration of the Districts.
- ITE International will promote the purchase of gift certificates that may be used toward the purchase of ITE products, membership, or meeting registration.
- Requested the Student Chapter Advisory Committee provide recommendations on how best to encourage Student Chapter Advisors to actively participate and provide support of their respective student chapter (District 6 is way ahead on this one!).



Candidates Sought for District Administrator

Wes Pringle is stepping down as District Administrator. Wes served the District excellently for almost 10 years in this role.

If you or someone you know might be qualified and interested in replacing Wes, please contact:

Rory Grindley
Public Works & Utilities Dept.
Pierce County
2401 S. 35th St, Rm 150
Tacoma, WA 98409
(253) 798-7250
rgrindl@co.pierce.wa.us

Nominations are due by December 31.



Safety & Kids: A California Summit

The California Office of Traffic Safety (OTS) will be replacing its bi-annual conference with a Traffic Summit. The goal of the Summit will be to explore and exchange ideas, and to generate new concepts and solutions, for improving child-related safety. The conference will be held at the Hilton Hotel in Universal City (Los Angeles), May 16-19, 2004. For more information, or to submit speaker suggestions, please contact the Safety & Kids organization at: (213) 494-7899 info@safetynkids.org www.safetynkids.org

President's Message

(Continued from page 1)

importance throughout the west. The Section President will have the responsibility to submit information, but all chapters and members are free to provide information to their Section President as they see fit. Don't be afraid—you can do a series of one sentence/one paragraph items or just a few. The value is in the sharing of current transportation information among our members. Emphasis will be on brevity—short facts and notes. Many thanks to Laurie Kozisek (Alaska), Sarath Joshua (Arizona) and Jeff Hereford (Central Coast) for jumping right into the fray in this issue. Here is the schedule of WesternITE issues assigned to sections for the coming year with the deadlines for publication in parenthesis:

- *Nov/Dec:* Arizona, Alaska & CA Central Coast (Sept 25)
- *Jan/Feb:* Colorado-Wyoming Oregon & Central California (Nov 25)
- *Mar/Apr:* Hawaii, Washington, Northern California, CA Border & Southern California (Jan 25)
- *May/June:* Intermountain & Northern California/Colorado/Wyoming & Central California (Mar 25)
- *July/Aug:* Oregon Hawaii & SF Bay Area (May 25)
- *Sept/Oct:* Washington, New Mexico & SB/Riverside (July 25)

Submissions should be sent to the WesternITE Managing Editor and/or the District 6 President.

Flash Mob

Here are a few quick reminders for members regarding upcoming deadlines:

If you are interested in or being nominated for District 6 elected positions (Secretary Treasurer or International Director) please contact your Section/Chapter Past President as they will be providing nominations for consideration in the coming month. There is plenty of information about these positions on the District 6 web site if you have questions about these elective offices.

If you have ideas on persons that are deserving of the District 6 Individual Achievement or Lifetime Achievement awards (background on these awards can be found on the District 6 web site under Awards) please forward those to either your Section/Chapter President or Past President so they can forward that person to the selection committee headed by Julie Townsend this year.

Candidates for the District Administrator position are also being received, as Wes Pringle will be stepping down from that position after nearly a decade of outstanding service to District 6. If interested, or know of someone who might be interested, please contact Rory Grindley before the end of the year by email at RGRINDL@co.pierce.wa.us, phone (253-798-7250) or mail (Pierce County; Public Works & Utilities Dept.; 2401 S. 35th St., Room 150; Tacoma, WA 98409).

Those sections or chapters in District 6 interested in hosting the 2009 Annual Meeting should submit an email to me this fall indicating your potential interest. This will be a non-California meeting, and the selection will be made in June 2004 at the

Sacramento Annual Meeting. At this time I would like to find out which sections have interest in this meeting. More information can be found on the District 6 Web site under future meetings.

Abstracts for the District 6 Annual Meeting in Sacramento are due early in December. Go to <http://www.westernite.org/annualmeeting/s/papers.htm> for more details about the call for papers.

Speaking of Sacramento, the District 6 Annual meeting is scheduled for June 20 to 23, 2004, and the local arrangements committee (headed by Bob Grandy and Steve Brown) are planning an outstanding event of technical and social programs for our members to get together and share ideas and information about our transportation profession. For those of you in the Northern California Section that have not been involved in an annual meeting, this will be a wonderful event and your support of your local arrangements committee is greatly appreciated—volunteers are always welcome!

Sign of the Times



Submitted by Steven Ford, Mendocino County Department of Transportation; pictures were taken in British Columbia

“Does this sign fit into engineering, education, or enforcement?”

Submitted by Pierre Pretorius, Kimley-Horn and Associates; taken in South Africa



Mark your calendars for the 2004 International Annual Meeting in Florida



ITE Position on Proposed ADA Guide lines for Public Rights of Way



ITE Headquarters staff in Washington DC have been working very closely with the U.S. Government Access Board about ADA access issues for the past year or more. This process has resulted in a better understanding of the needs of the ADA community, and it has given the Access Board a better understanding of ADA programs upon our profession. The draft requirements were published in the Federal Register as a Preliminary Notice of Proposed Rulemaking, and over 1400 comments were received. The ADA Access Board is now studying the various comments and is expected to adjust proposed rules in areas where comments

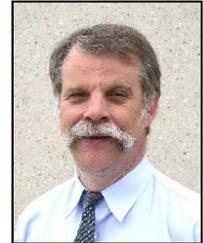
were received. The issues regarding signalization of roundabout entries, on-street handicap parking, and changes in the standard walking speed for traffic signals are currently under reanalysis, and it is probable that these provisions will be modified. There will also be clarifications about treatment of existing facilities. The issues for location and dimension of new facilities are probably less likely to change; however, there will be clarifications in future proposed rulemaking.

A current report on the proposed rules and key responses is at this URL:

<http://www.access-board.gov/news/prow-update.htm>

ITE has been monitoring this subject at the international level closely. In fact, ITE has fulfilled several contracts issued by the Access Board to insure that they more fully understand the effect of their requirements on our profession. I will keep watching this at the HQ level.

*Rock Miller, ITE
International Director
2004-2006*



Karen Aspelin Accepts Appointment to Serve as District 6 Technical Chair

Randy McCourt, District 6 President, is pleased to announce that Karen Aspelin, with Parsons Brinckerhoff Corporation in Albuquerque, New Mexico, has accepted the position of District 6 Technical Chair. She will take the place of Ken Ackeret,

who was elected to the District 6 Board. Karen most recently served as Local Arrangements Committee Chair for the very successful Albuquerque meeting in 2001.

Randy and the rest of the Board are very pleased and excited to have Karen serve the District again. Karen's term is for three years, through November 5, 2006.



Attention Section and Chapter Presidents!

ITE has posted everything you need to write a winning Section or Chapter activity report to their Web site! Visit the links below to find:

- Section Activity Award Application and Report Outline:
<http://www.ite.org/awards/SectionAct2004.pdf>
- Student Chapter Activity Award Application and Report Outline:
<http://www.ite.org/awards/StudentChap2004.pdf>

In addition, a student paper award application and information document is available at:

<http://www.ite.org/awards/StudentPaper2004.pdf>

Please pass along to any interested students and/or faculty advisors.

All submissions are due by April 1, 2004 (not fooling!)



In WesternITE 10 Years Ago

State of the Art Highway Vocabulary

NIMBY-Not In My Back Yard
LULU Locally Unacceptable (Unwanted, Undesirable)
Land Use
NIMFYE (Not In My Front Yard Either)
PIITBY (Put It In Their Back Yard)
NIMEY (Not In My Election Year)
NIMTOO (Not In My Term Of Office)
NOPE (Not On Planet Earth)
BANANA (Build Absolutely Nothing Anywhere Near
Anybody)

Created and Submitted by Conrad Lapinski

Positions Available

DKS ASSOCIATES

Engineer/Planner, Location:

Sacramento—The Planner/Engineer will work on transportation planning/engineering projects such as traffic impact studies, intersection analysis, traffic demand modeling, and transit feasibility studies.

Qualifications:

Required:

- Bachelor's degree in Civil Engineering or Urban Planning and a minimum of two years related work experience.
- Experience with traffic operations analysis including HCM, Traffix or equivalent software.
- Good written and verbal communication skills.
- Should be able to work both as a team member and independently.

Desired:

- Master's degree in Civil Engineering

or Urban Planning (specializing in Transportation).

- Experience in traffic simulation including Synchro, Corsim or Vissim
- Experience with GIS, such as Arcview.
- Experience in project management.
- Experience with travel demand modeling.

If interested, please submit resumes to careers@dksassociates.com.

CITY OF CAMARILLO, CALIF.

Traffic Engineering Associate, Salary \$59,582 - \$80,367/annually, plus excl. benefit package, incl. PERS 2% at 55. Participates in traffic engineering including transportation planning, signal timing and design, prepares traffic studies. Reviews environmental assessments and environmental impact reports. Minimum qualifications include a Bachelor's degree in Traffic Engineering or a closely related field. Registration as Traffic Engineer with the State of California or certification as

Professional Traffic Operations Engineer is desirable. If applicants do not meet required criteria, the position may be filled at the Traffic Engineering Assistant level. Apply immediately. Open until filled. City of Camarillo, 601 Carmen Drive, Camarillo, CA. 93010, or call 805-383-5618 for City app. (req'd). www.ci.camarillo.ca.us.

LSC TRANSPORTATION CONSULTANTS

Senior Traffic Engineer—LSC Transportation Consultants is seeking a Senior Traffic/Transportation Engineer for the Colorado Springs office. Responsibilities include management of traffic engineering studies for private development and local governments. PE Registration is required. MS in Transportation or Traffic Engineering is preferred. Email resume to lsc@lscs.com or mail to LSC, 101 North Tejon Street Suite 200, Colorado Springs, CO 80903.

CARTER-BURGESS

Civil Engineer 11598

Job Description/Responsibility:

The Denver, Colorado office of Carter & Burgess is looking for qualified candidates with five years of increasing responsibility in the traffic and/or transportation design field.

Candidate will conduct transportation and traffic/transportation analyses and studies; develop transportation solutions; documentation of analysis and recommendations; presentation and meetings.

Qualifications:

PE registration highly desirable. BS Civil Engineering required.

The successful candidate will have the following skills: traffic operations analysis, transportation planning, document preparation, and teamwork.

The following skills are desirable; CADD drawing, traffic feasibility studies, NEPA documentation of transportation analysis, traffic modeling.

How to apply:

Logon to our website at www.c-b.com/careers/ and apply directly online. Local candidates preferred. Relocation assistance may be provided.



Traffic Engineer

RBF Consulting, ranked #76 in the Top 500 Design Firms in the Nation by Engineering News Record (ENR) magazine, provides multi-disciplinary design engineering, planning and construction services in the built environment to private and public sector clients. Founded in 1944, RBF has a current staff of over 700 professionals and is located in offices throughout California, Arizona and Nevada. RBF is currently seeking a Traffic Engineer to join our team in our Irvine, CA office.

The position requires a Bachelor's degree in Civil Engineering, professional registration, and a minimum of 4 years of traffic/transportation engineering experience. Strong design skills utilizing AutoCAD/Softdesk and/or Microstation/InRoads is preferred. Lead design and CADD production staff in the development and successful delivery of all technical work products. Prepare traffic engineering design plans, such as signing, striping, traffic control, traffic signal, communication systems, Intelligent Transportation Systems, and lighting plans, specifications and estimates for city, county and state highway facilities.

Founded on a commitment to quality, professionalism and continuing innovation, RBF has also been ranked among the "Top 20 Civil Engineering Firms To Work For" in the Nation by Civil Engineering News. RBF offers an excellent compensation and benefits package including matching 401(k), profit sharing and bonus plans, and relocation assistance.

For further information please visit our website www.rbf.com and send your resume to:

RBF Consulting

14725 Alton Pkwy, Irvine, CA 92618 ■ Fax: (949) 855-7060 ■ Email: hrmail@rbf.com

EOE M/F/D/V

"WHERE EXCEPTIONAL PEOPLE ARE THE RULE"

Don't forget...

The latest Positions Available ads are always on our Web site!

Positions Available

Visa sponsorship is currently not available. Carter & Burgess is an affirmative action, equal opportunity M/F/D/V employer.

GILROY, CALIFORNIA

Senior Civil Engineer for Traffic—Salary: \$86,052 – 111,852 Annually, Plus Excellent Benefits

The City of Gilroy Engineering Division has three Senior Civil Engineers. Each Senior Civil Engineer is responsible for broad functions within the Engineering Division such as Utilities, Traffic, and Development Review. Ideally, over time, the Senior Civil Engineer will rotate to get experience and training in all three areas. The current opening in the Engineering Division is for a Senior Civil Engineer in Traffic. Graduation from an accredited college or university with a bachelors degree in Civil Engineering or a related field of study; five years of progressively responsible professional level civil engineering experience in related work and registration as a Professional Civil Engineer issued by the State of California is required. Registration as a Traffic Engineer by the State of California is desirable.

Apply By: December 5, 2003 at 5:00 p.m. A City of Gilroy application is required. For more information, contact: City of Gilroy Human Resources, 7351 Rosanna Street, Gilroy, CA 95020; call our job hotline at (408) 846-0406, or phone (408) 846-0233. EOE

CITY OF MODESTO, CALIFORNIA

City Traffic Engineer—Excellent career opportunity for an experienced and progressive leader to manage the Traffic Engineering Unit of the Engineering & Transportation Department for the City of

Modesto. This position reports to the Deputy Director of Engineering and Transportation, oversees a staff of 19 and will be responsible for the development, operation, and maintenance of the City's traffic system and facilities. Candidates should possess a blend of technical ability combined with superior supervisory skills. Min. requirements include Bachelor's degree; 4 years of increasingly responsible professional traffic engineering experience, including supervisory or lead responsibility. Master's Degree in Transportation desirable. Requires valid Certificate of Registration as Traffic Engineer or ability to obtain within 12 mos. of hire. Out-of-state candidates encouraged to apply. Annual salary range \$74,650-90,953 plus excellent benefits package including PERS retirement. Open until filled. Review of resumes begins 11/21/03. Apply asap on line at www.ralphandersen.com. For detailed brochure e-mail info@ralphandersen.com or call (916) 630-4900.

CHS CONSULTING

Transportation Planner/Engineer (Full Time/Part Time)—CHS Consulting Group, a fast-growing transportation planning and engineering firm in SF and Oakland CA, has immediate openings for one mid-level transportation planner and one mid-level traffic engineer positions. The ideal candidate should be a self-starter who enjoys challenging and fast-paced environment. Candidates should have at least 5 years experience with strong analytical, computer, written, and communication skills, and an understanding of both traffic and transit planning. Candidates with experience in HCS, TRANSYT-7F, Synchro, CORSIM, and VISSIM computer software are preferred. The ideal candidate for the traffic engineer's position should be a licenced traffic engineer or civil engineer in the State of California or is capable of obtaining the licence in the near future.

We have a number of exciting projects currently underway, including areawide planning studies, traffic analysis, signal design projects, traffic engineering studies, and EIRs.

Send resume and cover letter to CHS Consulting Group, 500 Sutter Street, Suite 216, San Francisco, CA 94102 or email to mwilliams@chsconsulting.net, or fax to 415-392-9788. Any question regarding this

offer, please call Ms. Williams at 415-392-9688. EOE

PARAMETRIX INC.

Transportation Planner/Traffic Engineer (K319)—Parametrix, a leading NW engineering, environmental sciences, and architectural consulting firm, is seeking a full-time SENIOR TRANSPORTATION PLANNER/TRAFFIC ENGINEER for its Kirkland, WA office. Responsibilities include transportation planning/traffic engineering projects, preparing technical documents/analyses, working with public agencies/multi-disciplinary teams, conducting corridor studies, transit planning, traffic signal design and operations analysis as well as non-motorized planning. Candidates will have 10+ years progressive experience in transportation planning and/or traffic engineering and a Bachelor's degree (Master's degree preferred) in transportation planning, urban planning, or related field. Candidates must have in-depth understanding of transportation planning and environmental documentation processes. Strong written and verbal communication skills are required. Experience with transportation modeling software is plus.

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Civil Engineer in the State of California, and Associate Membership in the Institute of Transportation Engineers are highly desirable. To apply, submit a completed City of Moreno Valley application to the Human Resources Department at 14177 Frederick St., P.O. Box 88005, Moreno Valley, CA 92552-0805. This position is open until filled. Applications and more information can be found on our website at www.moreno-valley.ca.us or call (909) 413-3045 EOE

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Traffic/Transportation Engineer—RK ENGINEERING GROUP, INC. has an opening for an entry level Transportation /Traffic Engineer. One to two years of professional experience in traffic engineering or transportation planning is desirable along with strong analytical, oral and written communication skills. The candidate must be familiar with the use of AutoCAD. We are looking for a "self-starter" who can work with a limited amount of supervision.

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We are looking for individuals who have intimate working knowledge of the San Francisco Bay area. Candidates should have a Bachelors degree with at least 10 years experience in transportation engineering and/or planning. Responsibilities include conducting business development activities including outreach, proposal preparation and interviews/negotiations. Professional engineer registration in California is highly desired.

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Transportation Engineer (Job #CO300)—Qualified candidates will have progressive experience in corridor studies, Right of Way Plans, design reports, preliminary engineering and final design. This position requires a minimum of BSCE, 5+ years transportation engineering experience, P.E. license preferred, progressive project management and client relation skills. Transit and CDOT background a plus. Public speaking skills are essential and consulting experience is desirable. Strong written and verbal communication skills are required.

Transportation Planner/Traffic Engineer (Job # CO301)—Responsibilities include transportation planning/traffic engineering projects, preparing technical documents/analyses, working with public agencies/multi-disciplinary teams, conducting corridor studies, transit planning, traffic signal design and operations analysis as well as non-motorized planning. Candidates will have Bachelor's degree, 5+ years progressive experience in transportation planning and/or traffic engineering. Candidates must have in-depth understanding of transportation

planning and environmental documentation processes. Experience with transportation modeling software is plus. Strong written and verbal communication skills are required.

Environmental Planning Manager (Job # CO302)—The successful candidate will provide technical analysis, task and/or project management on environmental and planning studies/permits, develop and manage scopes, schedules and budgets, assist in business development, and coordinate with agencies, clients and other team members. Primary tasks include NEPA-related analysis and reports, alternatives analysis and task management. Qualified candidates will have a Bachelor's degree in Planning, Environmental Studies or related field (Master's degree and/or AICP preferred, but not required); 5+ years of experience managing and preparing environmental and planning studies; extensive knowledge of planning concepts, principles, techniques and practices; knowledge and experience with NEPA.

Transit Planning and Design Practice Leader (Job #CO303)—The successful candidate will lead and work on transit planning and design projects. Qualified candidates will have demonstrated experience in the planning and/or design of fixed guideway transit facilities. Background and experience with transit facility planning and operations a plus. Requirements include a Bachelor's degree (Master's degree preferred), 10+ years progressive experience, PE license, as well as strong client relationships, project management and team-building skills.

Proven track record of business development and client relationships required. Value based leadership skills are a must. Experience with RTD consulting and business practices desired. Public speaking skills are essential and consulting experience is desirable. Strong written and verbal communication skills are required.

Transit Planner/Designer (Job #CO304)

The successful candidate will assist with transit planning and design projects, including fixed guideway systems, rail facilities, and bus facility and operations. Qualified candidates will have Bachelor's degree (Master's degree preferred), 5+ years progressive experience, PE license and/or AICP certification a plus. Previous consulting experience is desirable. Strong written and verbal communication skills are required.

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Editor's Corner

This issue completes my first year as Managing Editor of *WesternITE*. My goal has been, and will continue to be, putting the highest-quality newsletter possible in front of the membership. I want each issue to be informative, timely, accurate, and attractively presented. It's been very fulfilling to hear the feedback I've gotten so far. Please continue to send your questions, comments, and submissions to me.

I was surprised to learn that abstracts for the International meeting to be held in Melbourne, Australia, in 2005

are due less than a month after you read this column. If you're planning to attend this meeting and have something to share with your fellow traffic engineers, please consider contributing your knowledge to the technical program to make the meeting better. Visit www.ite.org for more information.



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 DKS Associates
 1400 SW Fifth Avenue, Suite 500
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 (503) 243-3500
 (503) 243-1934 fax
 rsm@dksassociates.com

Vice President

Zaki M. Mustafa, P.E.
 City of Los Angeles
 221 N. Figueroa St., Suite 300
 Los Angeles, CA 90012
 (213) 580-5361
 ZakiM@earthlink.net

Secretary-Treasurer

Ken Ackeret, P.E., Ph.D., PTOE
 Kimley-Horn and Associates, Inc.
 1050 E. Flamingo Road, Suite 210
 Las Vegas, NV 89119
 (702) 734-5666
 (702) 735-4949 fax
 ken.ackeret@kimley-horn.com

Past President

Julia Townsend, P.E., PTOE
 kdANDERSON Trans. Engineers
 3853 Taylor Road, Suite G
 Loomis, CA 95650
 (916) 660-1555
 (916) 660-1535 fax
 juliatownsend@infostations.com

District International Director

Richard T. Romer, P.E., PTOE
 Orth-Rodgers & Associates, Inc.
 1140 Town Center Drive, Suite 190
 Las Vegas, NV 89144
 (702) 233-4060
 (702) 233-4560 fax
 rromer@orth-rodgers.com

District International Director

Ray Davis, PE, PTOE
 Public Works Director
 City of Belmont
 1070 Sixth Avenue, Suite 306
 Belmont, CA 94002
 (650) 595-7459
 rdavis@ci.belmont.ca.us

District International Director

Pat Noyes
 Pat Noyes & Associates
 1566 County Road 83
 Boulder, CO 80302
 (303) 440-8171
 pat@patnoyes.com

District Administrator

Wes Pringle, P.E.
 WPA/Willdan
 27042 Towne Centre Drive, Suite 270,
 Foothill Ranch, CA 92610.
 (949) 470-8880
 (949) 770-9041 fax
 wpringle@willdan.com

District Director-Elect

Rock Miller, P.E., PTOE
 Vice President
 Katz, Okitsu & Associates
 17852 E. Seventeenth St, Suite 102
 Tustin, CA 92780
 (714) 573-0317
 (714) 573-3172 fax
 rmiller@katzokitsu.com



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Bob Grandy, Co-Chair
 Grandy & Associates
 231 G Street, Suite 28
 Davis, CA 95616
 (530) 756-2935
 grandytc@pacbell.net

Steven Brown, Co-Chair
 Fehr & Peers Associates, Inc.
 2990 Lava Ridge Ct., Suite 200
 Roseville, CA 95661-3058
 (916) 773-1900
 s.brown@fehrrandpeers.com

Managing Editor

John A. Kerenyi, P.E., PTOE
 Kimley-Horn and Associates
 2100 W Orangewood Ave
 Suite 140
 Orange, CA 92868
 (714) 939-1030
 (714) 938-9488 fax
 john.kerenyi@kimley-horn.com

Technical Editor

Peter J. V. Koonce, P.E.
 Kittelson & Associates
 610 S.W. Alder St., Suite 700
 Portland, OR 97205
 (503) 228-5230
 (503) 273-8169 fax
 pkoonce@kittelson.com

Web Master

Jon Pascal
 The Transpo Group
 11730 118th Avenue NE
 Suite 600
 Kirkland, WA 98034-7120
 (425) 821-3665 x 230
 (425) 825-8434 fax
 JonP@thetranspogroup.com

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