

President's Message

This year's District 6 Annual Meeting will be held in conjunction with the International ITE Annual Meeting on August 24-27, 2003.

Once again, the Annual Meeting will offer an outstanding

technical program as well as numerous networking opportunities and social activities. Discounted registration fees are available to those registering before July 24, 2003. Remember that District 6 members will want to check the additional box on the registration form to register for the District 6 portion of the meeting as well as the International portion. For more information and registration material, please visit the ITE International website at: <http://www.ite.org/AnnualMeeting/>. I look forward to seeing a great District 6 turnout!

A new Student Sponsorship Program is underway for this Annual Meeting. Your help is needed to insure the pro-

(Continued on page 10)



Julie Townsend,
District 6 President

New PPLT Recommendations

Findings and Recommendations of NCHRP 3-54: Evaluation of Traffic Signal Displays for Protected/Permissive Left-Turn Control

By Chris Brehmer, P.E.; Kent Kacir, P.E., and David Noyce, P.E., Ph.D.

This article summarizes the results of extensive research efforts to identify the "best" traffic signal display for protected/permissive left-turn (PPLT) control.

Research Objective

The objective of Project 3-54 of the NCHRP was to evaluate the safety and effectiveness of different signal displays and phasing for protected-permissive left-turn (PPLT) control through laboratory and field studies. Study activities were designed to gather, analyze, and interpret data that would serve as the basis for recommending a uniform display for PPLT control. The study considered all current applications of PPLT control in the United States including arrangement,

indications, and placement, both leading and lagging operations, and safety considerations including situations where the yellow trap occurs.

This project did not develop any guidelines, warrants, or recommendations for the use of PPLT control; it was assumed that the traffic engineer has already de-

cidated that PPLT control is appropriate. Instead, the goal of this research project was to identify the "best" or most appropriate signal display, including arrangement and indications.

As part of the project, the Research Team coordinated, supervised, and reported on the field implementation of experimental flashing yellow arrow PPLT displays in cooperation with six volunteer agencies located around the country. In September 2000, Montgomery County, Maryland, became the first agency to implement the flashing yellow arrow display as part of the research project. Maryland's participation in the implementation study was subsequently followed by other agencies including the City of Tucson, Arizona; Jackson County, Oregon; the Oregon Department of Transportation; the City of Beaverton, Oregon; and Broward County, Florida. Figure 1 illustrates the flashing yellow arrow display in use on Highway 99E in Woodburn, Oregon.

The Flashing Yellow Arrow

The research study and field implementation effort identified several benefits of a four-section vertical, all arrows, flashing yellow arrow PPLT display. Benefits of the display include:

- The "yellow trap" is eliminated (see

(Continued on page 4)

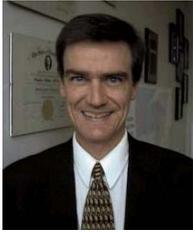
What's In This Issue

Fixed Radar Driver Feedback Signs	2
A Comparison of Specialty Retail and Shopping Center Trip Generation	2
Beta Test the Next Version of Synchro	3
Seattle ITE Meeting Information	6
One-Day Seminar for Intersection Safety	13
Legislative News	13



Figure 1: Four-section vertical flashing yellow arrow PPLT display in Woodburn, Oregon

Driver Feedback/Active Speed Monitor Signs May Reduce Vehicle Speeds



Randy McCourt

Active speed monitor signs are fixed mounted signs that provides drivers feedback on the speed they are traveling, similar to the portable speed trailers utilized by many communities. The City of Phoenix is reporting preliminary experience with several test sites (Paradise Village Parkway near 46th Street and 19th Avenue adjacent to Orangewood Elementary School). While the results of the two-year test are not complete and the sites included more than just the active speed monitor signs, some initial before-and-after findings indicate that the signs may play a role in a 3-to 5-mile per hour reduction in

speed. This matches closely with other research completed in Milwaukie, Oregon, in 1998, for performance of speed trailers in traffic calming, which demonstrated (when the trailers were present) a 4- to 5-mph reduction in speed. Some general findings from the Phoenix study were that the curb lane (nearest the sign) had greater speed reduction than interior lanes adjacent to the median (the streets in this study are rather large – five and six lanes). The influence of the speed monitor location may not be the only factor in this speed reduction, since slower motorists tend to drive in the curb lane. The City of Phoenix is currently evaluating four sites, focusing most of the effort on elementary and high schools on high-volume streets. For more information regarding the Phoenix test cases, contact Dennis Stringer at the City of Phoenix.



This preliminary study discusses sign visibility needs, and based upon this it may be that larger signs (than the stock sign) are important for larger streets to achieve desired results. MUTCD discussion is underway regarding these types of signs—whether they should be warning signs (yellow background) and how/if they will be approved for application and what sizes are appropriate for the speed and number of lanes.

A Comparison of the Trip Generation of the Specialty Retail and Shopping Center Land Uses

By Richard Gamble, Concurrency Engineer III, Clark County, Washington

The ITE Trip Generation book lists two uses with similar definitions, but with different trip generation rates, during the PM peak hour of the adjacent street traffic: Specialty retail (ITE land use code 814), and shopping center (ITE land use code 820). Inspection of the data shows the specialty retail use has substantially fewer data points than the shopping center use. For example, specialty retail's data set

ranges from approximately 18,000 square feet to 215,000 square feet and only has three data points within this range. (Both the PM peak hour and the ADT data have this limitation.) In comparison, the shopping center's data set ranges from approximately 1,700 square feet to 2,200,000 square feet and has 401 data points.

A study was performed to determine which land use category should be used to estimate trip generation within Clark County, Washington; or whether a special

trip generation rate should be used. County staff studied small retail "strip malls" within the county to determine which land use category best predicted the trip generation rate. The local data were also compared with ITE rates to evaluate how the definitions of retail uses actually matched the uses in the field.

Data Collection

Ten sites were analyzed. It was very difficult to find a "strip mall" that only included merchandising facilities. All of the trip generation information that was collected by staff included some other uses that weren't purely merchandising

Figure 1: Trip Generation for 10 Retail Sites in Clark County

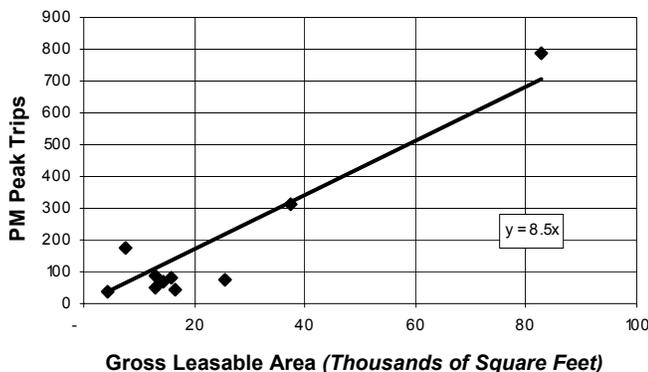
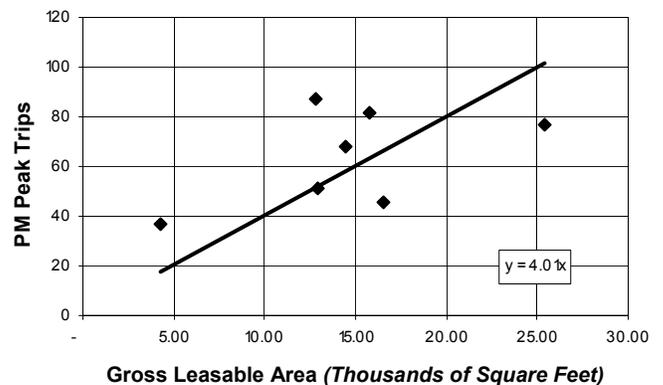


Figure 2: Refined Trip Generation (Seven Sites)



facilities. These other uses included office spaces for chiropractor, dental, and real estate uses, along with uses such as high-turnover, sit down restaurants and convenience stores. Although the data included these other uses, the data comparison to ITE should be valid based on the definitions for each ITE category. By definition, the specialty retail use contains "a variety of retail shops and specialize in quality apparel, hard goods, and services such as real estate offices, dance studios, florists, and small restaurants." In addition, the definition for shopping center includes "non-merchandising facilities such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities.

Another distinction in the data is made with respect to the age of the facility. Staff speculated that older facilities may have a greater proportion of uses that are economically depressed, such as barber shops, TV repair, or re-upholstering shops. If the newer facilities had more economically active uses, such as video rental stores and fast-food restaurants, then the trip generation may be higher, and thus would be better represented by the higher trip generation rate of the shopping center land use.

Results

Using the entire data set of ten locations, the average weighted trip rate for all of the uses analyzed in the field is 7.5 trips/KSF of occupied area during the weekday PM peak hour of the adjacent street traffic. This trip rate was calculated using sites that ranged from 4,320 square feet to 82,826 square feet. In comparing the actual site trips with the ITE estimated trips, the ITE specialty retail rate under-predicted the trips by 51%, the ITE shopping center rate under-predicted the trips by 30%, and the ITE shopping center equation over-predicted the trips by 119%. Figure 1 is a plot of the collected data.

Upon inspecting the data, it appears that three sites are outliers. Two data points, greater than about 25,000 square feet, have a higher average rate than the rates shown for the lower eight data points. In addition, of the remaining eight data points, the data point at 7,500 square feet appears to be an outlier and should be removed from the data set. In comparing the remaining seven sites, a more realistic average weighted trip rate is 4.01 (See Figure 2). This trip rate was calculated using sites that ranged from 4,320 square feet to 25,370 square feet.

The remaining seven sites generate a more realistic average weighted trip rate of 4.38 trips/KSF. The sites composing this rate range from 4,320 square feet to 25,370 square feet GLA. In comparing the actual

site trips with the ITE estimated trips, the ITE specialty retail rate under-predicts trips by 40%, the ITE shopping center rate under-predicts trips by 14%, and the ITE shopping center equation over-predicts trips by 178%. This staff-estimated rate appears to be best to about 25,000 square feet.

The ITE weighted average rate of 3.74 trips/KSF represents all 401 data points in the ITE shopping center land use. In addition, this rate is relatively close to the staff-estimated rate of 4.38 trips/KSF. If the ITE rate is used, rather than the County estimated rate of 4.38 trips/KSF, the maximum difference is calculated at 25,000 square feet, at which the ITE rate would estimate 16 fewer trips than the staff-estimated rate.

No relevant distinction with regard to the age of the facility and the trip generation rate was found.

Recommendations

For retail uses equal to or less than 25,000 square feet, use the ITE weighted trip generation rate. In addition to the relatively small difference between ITE and the County rates, there is greater acceptance in the traffic engineering field for the ITE data. For retail uses greater than 25,000 square feet, use the shopping center equation. The specialty retail rate is not recommended for use.

Trafficware Announces Beta Test for Version 6 of Synchro Plus SimTraffic Software

Testing period allows participants to evaluate new features including queue interaction, roundabout, and curved link modeling

Albany, California—Trafficware® Corporation, a leading developer of transportation analysis software, today announced its plans for a public beta test period for version 6 of Synchro® plus SimTraffic®, its traffic analysis software suite. The 60-day beta test, set to start at the end of May, gives existing software users the opportunity to preview the product and suggest changes.

Trafficware's software suite is a complete solution for optimizing and modeling urban traffic networks. The suite comprises Synchro, a signal timing and analysis program, and SimTraffic, a fast, easy-to-use, microscopic simulation and animation package.

"The Synchro plus SimTraffic 6 beta represents a key milestone for Trafficware," said David Husch, Trafficware's CEO. "It allows us to put the product through its paces by users in a variety of companies and public agencies. Additionally, this release—the first since 2001—delivers the features that customers have been asking for, while giving them the opportunity to influence the final product. With the help of our beta testers' detailed feedback, we'll be on track for a production release of version 6 this fall."

Version 6 adds users' most desired features. The most significant enhancement is queue interaction modeling. "This is a great addition to the science of traffic engineering," says John Albeck, Trafficware's senior transportation engineer. "Until now, there really hasn't been a software program to assist with coordination of congested links. Synchro 6 addresses this and not only allows the user to model good signal coordination, but show how queue interactions can expo-

nentially increase delay and reduce capacity."

Other improvements included in the beta test software are:

New in Synchro 6

- Queue interactions: modeling of spillback, starvation, and storage
- Undo
- Curved links

New in SimTraffic 6

- Simulate roundabouts
- Right turn islands
- Batch processing and reporting of multiple runs

Trafficware Corporation invites existing users to join the beta test. Beta test participants will receive substantial discounts on the final production release of version 6 and be the first to access the new features. Please visit <http://www.trafficware.com/beta> for complete program details.

New PPLT Recommendations

(Continued from page 1)

- discussion below).
- The confusion of shared heads is eliminated.
 - No supplemental sign is required.
 - All types of phasing can be operated by time of day (protected only, permissive only, protected/permissive, or permissive/protected).
 - The display works at all unusual intersections.
 - No louvers or precise head placements are required.
 - The display can be mounted by pole, span wire, or median mount.
 - The display can use a dual-mode (green or flashing yellow arrow) indication in a three-section head.

About the Authors:

Chris Brehmer is a Senior Engineer with Kittelson & Associates, Inc. in Portland, Oregon. He was the Project Engineer for the NCHRP 3-54 research project. Chris is a member of ITE.



Kent Kacir is a Senior Associate with Siemens ITS in Portland, Oregon. He was employed by Kittelson & Associates, Inc. during much of this study and served as Principal Investigator for the research project. Kent is a member of ITE.



David Noyce is an Assistant Professor at the College of Engineering at the University of Wisconsin-Madison. He was initially employed as a Ph.D. student at Texas A&M University and then an Assistant Professor at the University of Massachusetts-Amherst while serving on the project as a researcher and advisor. David is a member of ITE.



- The display can be used for right turns.

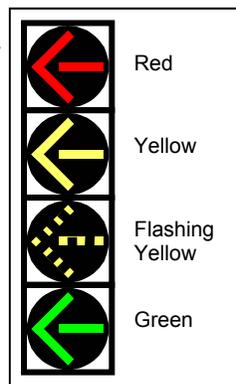
NCHRP 3-54 Research Findings

The research activities resulted in many significant findings related to the operation and design of PPLE control. Specific to the project recommendations, the research team offers the following key findings:

- The flashing yellow arrow and circular green indications are equally understood by drivers in both simulator and field environments (even though most drivers had never seen the flashing yellow arrow before).
- The flashing yellow arrow showed fewer fail-critical responses (driver incorrectly assumes right-of-way), compared to the standard circular green indication.
- The flashing yellow arrow display was successfully implemented in the field in five geographic locations with little to no technical or political problems.
- The majority of practicing traffic engineers contacted during the study endorsed the flashing yellow arrow display.

NCHRP 3-54 Study Recommendations

In January 2003, the NCHRP 3-54 study team submitted the Final Report to NCHRP for publication. The report documented the findings and conclusions of a multitude of research activities spanning seven years. The report identified three recommendations, which are:



The four-section flashing yellow arrow display

Recommendation #1:
Incorporate the Flashing Yellow Arrow Display into the MUTCD as an Alternative to the Standard Circular Green Indication

- The recommended display is an all-arrow four-section display. A three-section display with a dual-mode (green or flashing yellow arrow) lens could also be allowed since it conveys similar information to the four-section display.
- The display arrangement should be located over the left-turn lane in an exclusive signal arrangement (a sepa-

rate display face for the left-turn movement). This exclusive display face reinforces the association between the left-turn movement and its corresponding signal indications (display face).

- Only one indication shall be illuminated at any time.
- The flashing yellow arrow permissive indication should be logically tied to the opposing through movement green indication/display (rather than the adjacent through movement green indication.) See discussion below.
- No supplemental signing is needed.

Recommendation #2: Conduct a Follow Up Study

The follow up study should do the following:

- Analyze all available crash data for the experimental flashing yellow arrow displays implemented as part of this study;
- Identify whether the flashing yellow arrow display should become the only display allowed in the MUTCD for PPLT operation; and
- Identify an implementation plan.

Recommendation #3: Restrict the Use of the Flashing Red Indications

While the flashing red indications did show a high level of driver understanding and low fail-critical rate (lowest of all displays considered), they were not recommended for further implementation. Field studies showed that drivers, including law enforcement, treated the flashing red indications identically to the flashing yellow indications; they yielded rather than stopped. Dilution of the meaning of red was the primary reason that the flashing red indications were not considered for further implementation. There are situations that the traffic engineer may desire the more restrictive operation, therefore, the Research Team recommended restricted use of flashing red indications. The flashing red indication for PPLT should only be used following an engineering study that has concluded that all motorists must come to a complete stop before proceeding on the permissive interval.

Discussion

The Research Team recommended the allowance of the flashing yellow arrow display (as opposed to the replacement of the current MUTCD standard) because many existing PPLT displays remain that could not be easily replaced due to right-of-way and cost prohibitions. Additionally, post implementation crash statistics will become available over time (per Recom-

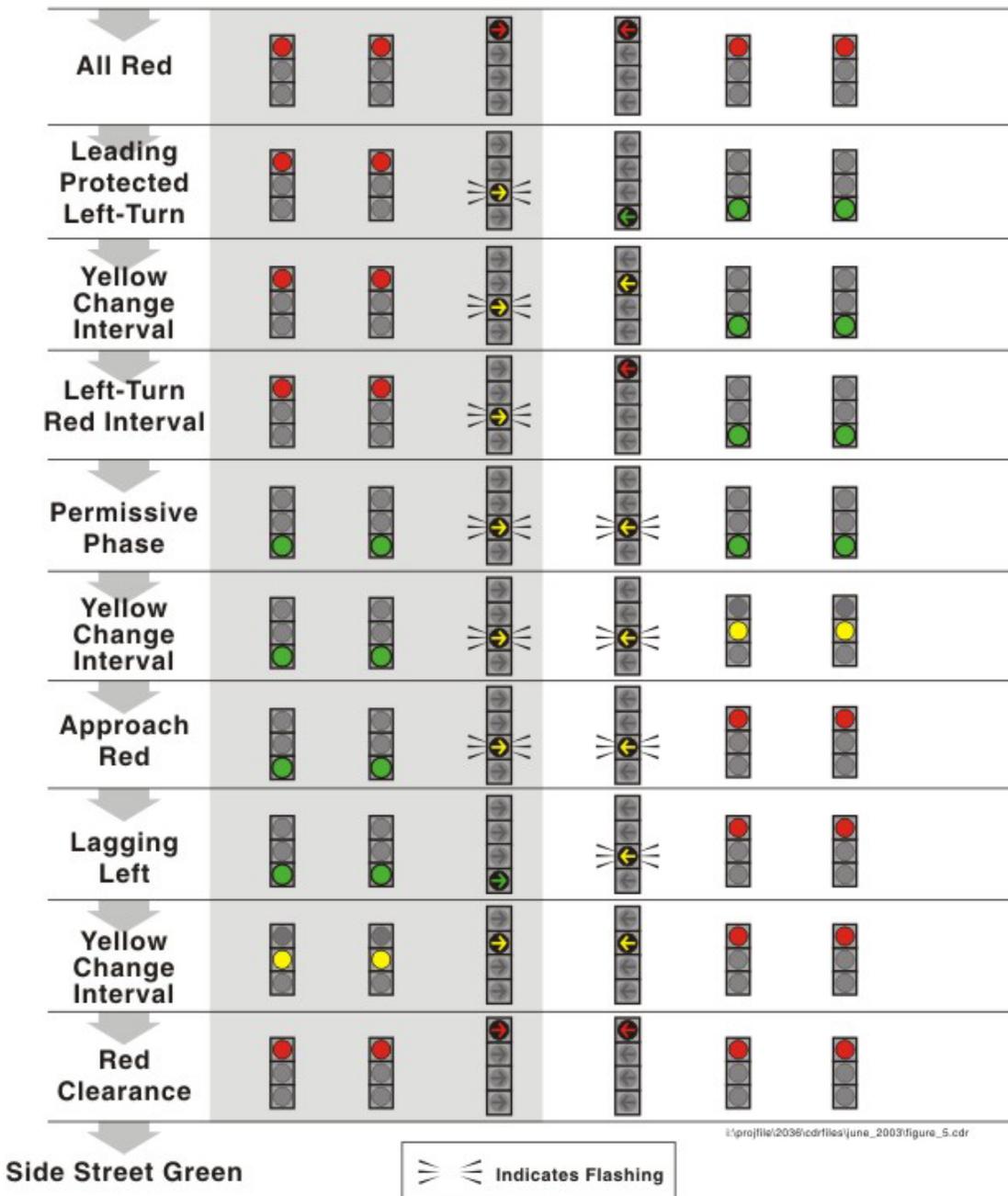
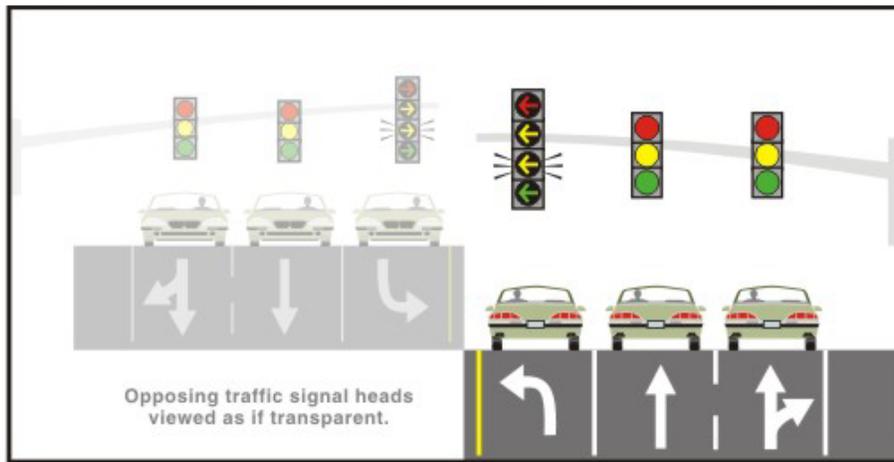


Figure 2. Sequence of indications using the four-section, all-arrows left-turn display.

mendation #2), and only after such data are analyzed and reported could such a wholesale replacement be considered.

The Research Team expanded their recommendations to address specific display arrangements to be used. The four-section all-arrow display was recommended because the arrow display identifies the directional movement for which it is intended (left-turn or right-turn application). Over the course of the research project, there were extensive discussions within traffic engineering forums that left-turning drivers need to know that there is a change in right-of-way permissions. It has been proposed that a new display was needed that would change in color, mode, position, and shape. When in operation, these separate changes would ensure that drivers would be alerted to new information on the signal face so they could align their movements with the correct right-of-way permissions. Compared to the standard circular green display, each of these four criteria is incorporated into the proposed four-section flashing yellow arrow display as follows:

- Indication color changes from green to yellow
- Mode changes from steady to flashing
- Position changes both from a lateral change in display placement and a vertical change in the display arrangement
- Shape changes from a circular green to a yellow arrow.

Further, the Research Team recommended that the flashing yellow arrow permissive indication be logically tied to the opposing through movement green indication/display (rather than the adjacent movement through green). Logically tying a phase means that the traffic signal control software outputs the flashing yellow arrow indication (permissive turn) only

during the green interval of the opposing through phase. Operationally, this recommendation assures that when the permissive display terminates, the opposing through phase will terminate simultaneously and completely eliminate the yellow trap in all circumstances (including those associated with skipped phases, preemption sequences, conditional service, and overlap green extensions). Figure 2 (previous page) illustrates how the flashing yellow arrow display would operate without creating the yellow trap.

Current Status of the Project and Proposed PPLT Display

In early June 2003, the Research Team met with the following groups:

- The AASHTO Traffic Engineers Subcommittee,
- The National Committee on Uniform Traffic Control Devices Signals Technical Committee, and
- Section 4D (MUTCD) Traffic Control Signal Features (Task Force of the Signals Technical Committee).

The June meetings addressed many questions related to the findings and conclusions of the research project. The Section 4D task force responsible for traffic signal operations is currently identifying potential language for vote regarding deployment of the flashing yellow arrow in PPLT operations. The committee voted on, and approved, the four-section all-arrows display for use in exclusive PPLT applications (as an alternate to the circular green indication). The Research Team is working with the committee to evaluate potential ways to implement the flashing yellow arrow in shared head applications.

The NCHRP Project 3-54 Final Report will be published by the NCHRP in summer 2003.

Future Implementation of the Flashing Yellow Arrow Display

If you are interested in implementing the new display, please contact one of the authors. They can provide you with a “ready-made” template for requesting approval for experimentation from the Federal Highway Administration.

Documentation Availability

As mentioned above, the NCHRP 3-54 Final Report will be published in Summer 2003. Included with the final report will be a CD-ROM that will contain all of the working papers produced during the study. The following working papers are currently available:

- Engineering Assessment (WP 1)
- State-of-the-Practice (WP 2)
- Photographic Driver Study (WP 3)
- Field Traffic Operations Study (WP 4)
- Field Traffic Conflict Study (WP 5)
- Crash Data Analysis Study (WP 6)
- Conduct Confirmation Study (WP 7)
- Conduct Implementation (WP 8)

For more information, animated illustrations, implementation applications, and copies of the project reports, visit the project website at <http://projects.kittelson.com/pplt/>

Kittelson & Associates, Inc. performed the NCHRP 3-54 research project reported described above in association with the University of Massachusetts—Amherst, the Texas Transportation Institute, and Siemens Intelligent Transportation Systems.

Discuss this article at www.westernite.org— Visit the Tech Board feature of the District 6 Web site to comment on, or otherwise discuss this article.

Seattle Meeting Early Registration Deadline Approaching!

Sign up by July 24th to save \$75 on your registration fees for the ITE International Meeting, which will be held August 24-27 in Seattle. Remember to sign up for the District 6 activities via a separate check box on the same registration form. You'll save an extra \$25 if you pre-register for the District 6 activities now instead of waiting until you arrive in Seattle. If you don't take advantage of the District 6 functions, you'll miss some of the best activities in the meeting, including the Traffic Bowl and the Western States Luncheon.

District 6 Activities format change: With the District's Annual Meeting being held in conjunction with the International Meeting in August, the format of the traditional District events will be modified. The Business Luncheon and Traffic Bowl will be held on Monday, the Western States Luncheon will be moved to Tuesday, and all the District 6 Technical Sessions will be held on Wednesday. Unfortunately, there will be no District Awards Banquet (the awards will be presented in combination with the two luncheons), and no sched-

uled Family Night event (but Seattle is still a very family-friendly city!)

Remember:

you can register for the full District 6 package without registering for the International Meeting, which will entitle you to attend the two District Luncheons, the Traffic Bowl, and a full day of Technical Sessions on Wednesday. You will also receive the CD Compendium of the full International Meeting, but you will not be able to attend the Monday and Tuesday Technical Sessions. So sign up today and we'll see you there!



Section and Chapter Activities



San Francisco/ Bay Area Section

April meeting—The April 17 meeting at Hs. Lordship's restaurant in the Berkeley Marina featured Bay Area university students presenting their transportation research project findings to the 45 attendees. Natasha Goguts from the University of California at Berkeley presented information developed in "Transit-Oriented Development: State of the Practice and Future Benefits," a project sponsored by the Transportation Research Board. This project is investigating transit-oriented development (TOD) policies and programs to determine which succeed and why, based on ten case studies from throughout the United States. TOD is defined as being located at transit stations, physically oriented to the stations with pedestrian-friendly access and amenities, and consisting of a mix of land uses. While transit agencies seek projects that will provide revenue, governments generally wish to reduce congestion and enhance economic development. The various social, economic, and environmental goals converge to a shared objective, to increase transit ridership. Arlington County's case study proved particularly successful, and the apparent key was the planning, which was facilitated by: the County's managerial government (no individual cities/towns involved), early recognition of the benefits of TOD, planning before transit started operations, and sticking with the plan. The results were increased development and increased ridership. The project team is now gathering time-sequence data on this development and ridership experience, to

Attention Scribes: Publication Deadline

The deadline for submitting Scribe reports is the 25th of the odd-numbered month prior to the date of the issue. For example, Scribe reports are due by March 25th for publication in the May-June issue.

analyze the operational, demographic, and policy variables, and develop models.

"A Theory on Capacity Drop" was presented next by Jorge Laval of UC Berkeley, who started with the observation that as traffic volume builds during the day on a roadway, it can initially reach a very high flow rate for a short time, but then the capacity drops and a queue forms. Mr. Laval then stated the claim that this loss of flow is caused by the inability of vehicles changing lanes to accelerate instantly to the speed of the faster lane. He mentioned some limitations of the standard kinematic wave flow model, and proposed extensions of this model to account for moving bottlenecks, such as slow vehicles and lane changes, and multiple-lane factors, such as different speeds in each lane and driver demand to change lanes. Based on computer simulation runs using the proposed kinematic wave model extensions, Mr. Laval developed graphs depicting the capacity drop for various heavy vehicle percentages and roadway grades.

Posterboards for two other projects were also on display at the meeting: "Assessment of the Impact of Incidents near Bottlenecks" by Monica Menendez, and "Study of Platoon Dispersion" by Yu Zhang and Dianhai Wang.

May meeting—The annual joint meeting of the San Francisco Bay Area Section and the South Bay Chapter was held at the Blue Chalk Café in downtown Palo Alto on May 15. The Master Plan for Norman Y. Mineta San Jose International Airport was presented to the 50 attendees by the Airport's Deputy Director, David Maas. This \$2.8 billion plan will include the following surface transportation improvements:

- People-Mover connection to First Street Light Rail Station and/or Caltrain Station
- Reconstruct Interstate 880/Coleman Interchange
- Two Grade-Separated Intersections at Entrance Roadways
- Two-Level Circulation Roadway "Loop"

A new Central Terminal will be constructed, as well as modernized Concourse areas. The Master Plan incorporates permanent solutions for federally-mandated security directives. Several political hurdles were faced by the Plan, but last March, San Jose voters passed the Airport Security and

Traffic Relief Act, which sets the policy direction the Master Plan will follow.

Rich Haygood, Co-Scribe

Washington State Section

*Washington ITE
Student Night
Meeting*



Fourteen students witnessed the student paper competition at the annual Washington State Section Student Night on May 15. The event was held adjacent to the University of Washington at Ivar's Salmon House and drew a total attendance of 39. Seventeen ITE members graciously sponsored a student dinner for the event. Some members were generous enough to sponsor two students!

At the conclusion of the excellent dinner (your scribe recommends the salmon), Section President Mark Madden (KDD & Associates) acknowledged those who sponsored the student dinners. Mark made a strong point to the students that due to the recent passage of a 5-cent increase in the Washington gasoline tax for transportation construction, their future professional services were going to be badly needed in the region to help build new transportation facilities.

Sherman Goong (Perteet Engineering) discussed the upcoming Section Annual Meeting (June 9-10) in Yakama. Sherman was excited with the quality of the program and activities for the event and encouraged members to respond to the registration announcement being sent out the following day. Separately, he noted that enforcement had been recently increased on Seattle's freeway express lanes. Jeff Webber (The Transpo Group), Chairman of Seattle's Local Arrangements Committee for the August 24-27 ITE Annual Meeting and Exhibit, discussed the benefits to the students of volunteering to assist with presentations at the meeting, including a free day of conference registration for each day volunteered. Jeff noted that the conference was going to be an exciting event for the local transportation profession and was excited with the quality programs being arranged.

The Washington Section awarded this

year's student paper competition with prizes of \$500 for first place, \$400 for second, and \$300 for third. Venky Shakar, Student Chapter liaison, introduced the three students and their papers. The distinguished judges, Jeff Highley (HNTB), Wayne Wentz (City of Everett), and Don Samdahl (Marai Associates) selected Xiaoping Zhang's paper "Development of a System to Collect Loop Detector Event Data" as the best presentation. The paper reviewed the effort to develop a system to accurately collect traffic information using single- and double-loop detectors in the freeway environment.

The second place paper was presented by David Rosen, "Travel Time to Evening Shopping Activities: An Exploratory Analysis." The paper was a very interesting statistical quantification of several individual factors influencing the frequency of PM shopping trips. The paper presented many interesting results.

The winner of third place was Songrit Chayanan and his paper "School sprawl and Travel Choices – Walking and Biking to School." The paper did an excellent job in statistically exploring the factors contributing to the mode split in school trips resulting in the significant reduction in non-motorized travel to schools in the vicinity of Gainesville, FL. The Chapter also awarded \$800 for excellence in transportation to outstanding undergraduate students Brooke Chesterfield, Jeremy Metzler, Sarah Moore, Chris Park, Maher Joudi, and Griffin Thornock.

Dave Alm, Scribe



Southern California Section

April meeting

The Joint ITE Southern California Section and Orange County Traffic Engineering Council (OCTEC) meeting was held on the evening of Wednesday April 16, 2003, at the Knott's Chicken Dinner Restaurant in Buena Park. Approximately 73 members were in attendance, including 31 students.

Five student groups, representing three ITE student chapters, presented research projects. The groups represented Cal Poly Pomona (three teams), University of California, Irvine (one team), and California State University, Long Beach (one team). The five groups were competing for scholarship awards presented to the school chapters by the ITE Southern California Section, and it was agreed by the Board that each school would receive at least one student chapter award to be sure to support all participating schools. Additionally, for the first time in several years, a student from California State University, Los Angeles, also attended. The group acknowledged this and warmly welcomed him.

Robert Wheeler, David Garcia and Catvu Quash, representing Cal Poly Pomona, presented the "Cal Poly Pomona Parking Structure Design." The students discussed their effort in designing a parking structure for the campus, including their evaluation of the parking structure layout and pedestrian and vehicle circulation.

Jeff Summers, representing California State University, Long Beach, described the Level of Service and Safety Field Survey on SR-1, which he is conducting for the City of Redondo Beach in the heart of the City's Specific Plan development. He discussed his efforts in evaluating the impacts of the increased residential density on three Pacific Coast Highway intersections, including a review of both the safety and capacity of the intersections.

Gerry Hernandez, Jay Liew and Edmund Chew, representing Cal Poly Pomona, presented the "Temple Avenue Traffic Analysis," an analysis of an arterial highway adjacent to Cal Poly Pomona. They provided an overview of traffic volumes on Temple Avenue, the circulation pattern of the campus and then presented the outcome of their study.

Arwa Aweiss, representing the University of California, Irvine, presented "Integration of REACT and TRACER." This project is integrating TRACER GPS in-vehicle data with the REACT web-based travel planning and updating system. The project is an evaluation of the integration of both technologies and the consumer interface with the devices.

Eric Maya and Pablo Para, representing Cal Poly Pomona, presented "The City of Claremont Traffic Signal Synchronization Project." The students discussed how they combined a planning and traffic engineering effort using Synchro software to coordinate the City traffic signal network.

At the conclusion of the meeting, the scholarship awards for the presentations

were announced. The awards were as follows:

- 1st Place: "The City of Claremont Traffic Signal Synchronization Project," \$500
- 2nd Place: "Temple Ave Traffic Analysis," \$300
- 3rd Place: "Integration of REACT and TRACER," UCI, \$200
- 4th Place: "LOS and Field Safety Survey on SR-1," \$100

Following the student presentations, Richard Romer, Orth-Rodgers & Associates, presented The Zen of Romer, career advice for both students and professionals. His presentation began with an overview of the facts facing the engineering profession workforce. Engineering graduations are at a 20-year low, while 50% of the engineering workforce will be eligible for retirement in the next five years. Current engineering students will be the future core of the engineering workforce, and in his presentation Mr. Romer provided tips for students who will be graduating soon, and professionals, too! He described the differences between working in the public sector versus the private sector and how policy is developed for each. Mr. Romer also discussed the key skills that are required in both sectors of engineering: communication, effective management, ethics and liability. He emphasized how a "can-do" attitude by engineering professionals is key to success in the workplace.

The two headliner presentations followed the theme of "Who's Been Working on the Railroad." Lou Cluster, ACE, presented "The Status of the ACE Project." The ACE Project is part of a larger transportation corridor known as the Alameda Corridor East Trade Corridor that was created by the State of California. The trade corridor also includes rail improvement projects in San Bernardino, Riverside and Orange Counties.

The ACE project will extend the rail transportation system improvements recently constructed on the Alameda Corridor for 35 miles from its terminus near downtown Los Angeles through the San Gabriel Valley to San Bernardino County. It consists of multiple construction projects including median improvements, traffic signalization, roadway widenings and grade separations. It is intended to relieve traffic congestion in the San Gabriel Valley caused by longer trains, running at higher frequencies, resulting from the completion of the Alameda Corridor Project. Studies show that without it, traffic jams at rail crossings will double and traffic delays will increase by 300%. The project is also increasing safety around rail crossings, im-

proving traffic mobility, and ensuring the continued economic expansion in the San Gabriel Valley.

In his presentation, Mr. Cluster discussed the various “Jump Start” improvements that are underway, including the installation of pre-signals at four grade crossings and four-quadrant gates at five locations. This project presents the first instance in California where four-quadrant gates will be installed exclusively for heavy rail (freight and commuter rail). The Union Pacific Railroad Company (UPRR) will install and maintain the vehicle detection system and the exit control system for the four quadrant gates, setting precedent for future installations in California. He concluded his presentation with an announcement that an Invitation for Bid (IFB) should be advertised within the next two months for the installation of field traffic devices including traffic signal controllers, variable message signs, CCTV cameras and the related fiber optic communications for the network in the City of Pomona. The IFB, which will be advertised through ACE, is in its final preparation stages awaiting Caltrans funding approval. Additionally, Mr. Cluster mentioned that the CPUC is working on changes to the existing local agency versus railroad responsibilities at rail crossings.

Ken Ackeret, Kimley-Horn & Associates, presented the “Twain West Connector – The Railroad Underpass That Some Said Could Not Be Built.” His presentation was an excellent real-world execution of Mr. Romer’s “can-do” career advice. Due to the physical constraints of the project area, this project was seen by many as impossible to implement. However, when one of the major technical design challenges was overcome, the project moved forward smoothly. The challenge at hand was to meet the AASHTO requirements for sag vertical curves, which is based on motorist sight distance and the illumination emitted by vehicle headlights. The solution involved using the comfort level curve found in the AASHTO’s “A Policy on Geometric Design of Highways and Streets” guidelines book, and the implementation of fixed illumination at the underpass. Since the project was built in Las Vegas, adjacent to the Las Vegas Strip, obtaining power for illumination was no problem, and the generators that were required for the pump station associated with the underpass were used as back-up power for the underpass illumination should commercial power fail.

From concept, through approval, land acquisition, railroad coordination and construction, the project was completed in only four years. The project demonstrated

how issues can be solved with a positive approach and determination to find a viable solution and by returning to the basics. Once the specific design criteria were looked at more closely, the solution became apparent by identifying how to meet the underlying needs of the criteria through innovation, while maintaining its intended safety requirements.

It was a very informative evening and some questions from professionals to the students were asked to give the student chapter members a sense of future “real-world grilling” forthcoming in their exciting careers!

May meeting

The May meeting was held on Wednesday May 21, 2003, at the Monterey Hill Restaurant in Monterey Park. Approximately 60 members, including 2 students, attended this meeting.

Mr. Zaki Mustafa, LADOT, presented “Lab Results of Various Sign Reflectivity Options.” The City of Los Angeles Department of Transportation Signs Division is responsible for maintaining over 750,000 signs in the City of Los Angeles, and they purchase approximately 4,500 signs a year for new and replacement signing needs. Mr. Mustafa presented an overview of the various types of signs as defined by the ASTM (American Society for Testing and Materials), from porcelain signs (used for parking restrictions) to Type-9 signs (used for traffic control signage). While porcelain signs have a 20-30 year life span, their reflectivity can be reduced dramatically after one year. Other signs have a 10-year life span, which include a 10-year warranty from the vendors.

Many of the 4500 signs which are being purchased annually by LADOT are bought as replacement signs. As such, the City wanted to begin a testing program for the signs to evaluate the reflectivity of the signs purchased. They started the testing program in 1996, and from this testing program, they found that some of the new signs that were purchased from the vendors did not meet current reflectivity standards. The signs were returned to the vendors for replacement, but the replacement signs were also not meeting the reflectivity standards.

Mr. Mustafa emphasized the point that City Engineers need to check what is being purchased from their vendors. Just because a sign is approved by Caltrans, does not mean that each sign purchased by an agency will actually meet these requirements. To be sure, an agency must actually test the sign themselves. For this reason the City of Los Angeles conducts its own test-

ing of signs. Based on the testing conducted by the LADOT Signs Division, many sign vendors have improved the quality of their signs.

Mr. Mustafa also pointed out that, although sign vendors will state that the graffiti protective layer must be made by the same manufacturer of the sheeting, the City has found that you can mix and match the vendor of the graffiti protective brand with the sheeting brand.

Mr. Rock Miller, Katz Okitsu and Associates, presented “What You Need to Know to Cross the Street.” This presentation described three projects underway in the City of Santa Ana: a 1998 study of marked uncontrolled crosswalks, a 2003 marked crosswalk study, and the 2003 Safety and Awareness Campaign.

The 1998 study looked at 162 marked crosswalks in Santa Ana. It found that traffic volume played a factor in accident rates at marked pedestrian crossings. Crossings with higher ADT had higher risk than locations with lower ADT. In addition, it was found that multilane roadways had higher accident rates than two-lane roadways (one lane in each direction). One surprising find was that marked pedestrian crossings with high pedestrian volume did not have a substantially worse rate than marked crosswalks with low pedestrian volumes. The study also found that over half of all pedestrian accidents in the City occurred at mid-block locations, not at intersections. The study developed an average accident rate for marked crosswalks; an accident rate of 1 accident per million pedestrians per year was average at marked crosswalks.

The City conducted additional research in 2003. This study evaluated only multilane roads at unmarked, uncontrolled crosswalks. The purpose of the study was to compare attributes of accident sites with randomly selected similar sites.

The 2003 study evaluated 52 accident locations and 45 random locations, and determined that the following factors were significant at the accident locations:

- Pedestrian volume - Accident sites had an average of 80 pedestrian crossings per day, while random sites had an average of 29 pedestrian crossings per day.
- Medians—Accident sites tended to have less median facilities.
- Lighting—Accident sites had less lighting than the random sites.
- Bus stop facilities—There was a greater chance that an accident site had a bus stop nearby.
- Adjacent controlled intersections—Accident sites found to not have con-

trolled intersections nearby.

The results of Mr. Miller's study have been used by some cities as warrants for when a marked crosswalk may be considered at an uncontrolled intersection. He indicated that the study provides a good framework of what factors should be evaluated when identifying locations for marked crosswalks. The study also allowed for a revision in the average accident rate previously developed. The revised accident rate of 1 accident/330,000 pedestrians was determined from the random sample sites.

In the third segment of his presentation, Mr. Miller described the 2003 Pedestrian Safety and Awareness Campaign in the City of Santa Ana, entitled the "Moving Violator Campaign" which uses an "orange person" as the spokesperson. The campaign is targeted at school children and included many private/public partnerships and innovative marketing, including Southern California Automobile Association (AAA), street light banners, OCTA bus and FM radio ads. The Moving Violator Campaign is an OTS-funded program

which has reached many school children within the City. Additional information can be found at www.movingviolator.org. While it is difficult to measure the effectiveness of the campaign directly, it has reached many people and has increased awareness of pedestrian safety in the City.



Joaquin Siques, Co-Scribe

President's Message

(Continued from page 1)

gram's success. This particular program is aimed at increasing the attendance of ITE student members at the Annual Meeting from all of the Districts. Individual Districts and Sections have been working on financing students to attend the Annual Meeting. Currently, our District as well as many of the Sections within the District will be funding student travel to the Annual Meeting. However, we are looking at

increasing this effort to have the best student turnout yet! This is your opportunity to support the ITE student members from District 6. Single or combined contributions of \$1000 would provide a student airfare, hotel, and International conference registration (District registration for students is free) and contributors will be recognized at the conference. Please help invest in the future of our profession by sponsoring a student representative from our District. For more information about sponsorships, please contact Jim Ellison at Pierce County at (253) 798-7250 via email

at jelliso@co.pierce.wa.us.

A huge thank you to the Washington Traffic Safety Committee. They have contributed a \$10,000 grant! This grant will be utilized to offset the full cost of Annual Meeting registration for 13 ITE members from an array of different public agencies within Washington. If you or your organization would like more information on how to fund and set-up a similar type of program or would like to sponsor a portion of the Annual Meeting, please contact Jim Ellison.

Positions Available

LSA ASSOCIATES

Transportation Planner/Traffic Engineer—Environmental consulting firm in Riverside, California is seeking a Senior Transportation Planner/Traffic Engineer for General Plan circulation studies and traffic analyses for development and roadway improvement projects. Responsibilities include business development, proposal preparation, client contact, public meetings, project review, and quality control. Eight to 10 years of experience plus a degree in transportation planning, traffic engineering, urban planning, or a related field required. Must be able to show a proven record of accomplishments and increasing levels of responsibility. Must have working knowledge of various traffic analysis software and procedures. Registration as a Civil or Traffic Engineer desirable. Candidate needs to think critically and communicate effectively. Must be able to work independently and with other professionals in transportation, environmental, and planning functions. Fax resume and samples to H/R (909) 781-1084.

CH2M HILL

Senior Traffic Engineer, Bellevue, Wash.—CH2M HILL is the only engineer-

ing firm listed in Fortune Magazine's "100 Best Companies To Work For" in 2003! Join the "best", and put your talents to work in delivering an exciting mix of innovative and diverse transportation projects with our team of professionals in Bellevue, Washington.

Responsible for signal design, ITS planning and deployment, geometric design, corridor studies, and signal system analysis. You will manage traffic projects; provide quality control, and participate in business development activities. Requires BS in Civil/Transportation Engineering (MS preferred), Washington PE, and 10+ years Traffic Engineering work history. Must have excellent knowledge of traffic analysis techniques and related computer programs. Effective project management and communication skills, and team orientation needed. Roadway design skills a plus.

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- Traffic Engineers

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EEO/AA employer

CITY OF VICTORVILLE

The City of Victorville (population 70,961) is one of the top 10 employers in the Victor Valley and offers generous bene-

fits including: 9/80 work week and last week of December off/paid, a \$596 flexible spending account and 2.5% @ 55 PERS. The City is currently seeking applicants for the following positions:

Assistant Director of Planning and Development—Requirements include Bachelor's degree with a major in Urban Planning, Geography or closely related field and five years of professional-level planning experience including at least two years in a division level supervisory capacity. Salary range: \$65,064 up to \$79,272. After 7-1-03 \$67,596-\$82,368.

Original applications for each position along with a valid unrestricted California Class "C" driver's license is required by the closing date of Friday, June 13 @ 12:00 p.m. in the Human Resources Department at 14343 Civic Drive, Victorville, CA 92392. Jobline (760) 261-1508 Phone (760) 955-5051. <http://www.ci.victorville.ca.us>

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Katz, Okitsu & Associates is a specialized traffic and transportation engineering firm with offices throughout Southern Calif. We offer excellent salaries, competitive benefits, and a challenging and professional work environment. Currently we are accepting applications to fill openings for senior and associate traffic engineers, civil engineers and transportation planners in our Los Angeles, Tustin, San Bernardino, and San Diego offices. We have immediate openings for an Associate Engineer or Planner in our San Diego office, a Senior Engineer in our Los Angeles (Monterey Park) office and a Senior Traffic Engineer for our San Bernardino office.

Senior Engineer—The position in our Monterey Park office requires a B.S. in Civil Engineering; P.E. or T.E., plus 10 years experience in traffic or transportation project management and knowledge of principles and standards for design of traffic facilities. Supervisory experience is ex-

tremely important. Good oral and written presentation skills are necessary. The applicant should also demonstrate familiarity with design analysis and project management administrative software tools.

Senior Traffic Engineer for San Bernardino Office—Our San Bernardino office is seeking a Senior Engineer to manage the day-to-day operations. The candidate should have a B.S. in Civil Engineering, P.E., T.E., and/or PTOE. 10 years of experience in traffic and civil project management and scheduling, traffic analysis, report preparation and knowledge of principals and standards for traffic engineering. Candidate should have supervision and business development experience. Candidate should have good oral, written and presentation skills.

Associate Engineers/Associate Transportation Planners—Positions requires a bachelor's degree in Civil Engineering, Urban Planning or a related field, and five years of professional engineering or planning experience. Typical experience would include: project management, traffic analysis (including simulations), traffic design (including traffic signal, signing and striping, and street lighting design) and report preparation. Writing skills are a must. Certification from AICP is a plus.

Please visit our website at www.katzokitsu.com for more information about the company and the positions. E-mail salary history with your resume and cover letter and address it to Susan Grabiec at sgrabiec@katzokitsu.com with "Employment" in the subject line.

OREGON DOT

Traffic Engineer 2 (Traffic Devices Engineer)—Located in Salem Oregon, this position will assist the State Sign Engineer by directing the sign and pavement markings of the Traffic Design Unit. Position will provide leadership and training to engineers, prepare contract plans, specifications and estimates, and recommend revisions to sign and pavement marking policies and use of their interpretations in traffic engineering. Registration as a Professional Engineer (PE) is required. Salary \$3661-\$5242/month plus excellent benefits. For more details about this position, minimum qualification requirements, how to apply and supplemental requirements, please visit <http://www.odot.state.or.us/jobs> or call (503) 986-4030 (TTY 986-3854 for the hearing impaired) for Announcement #OCDT3164 and application. Application and required supplements must be received by 5:00 p.m. PST: May 30, 2003. ODOT is an AA/EEO Employer, committed to building workforce diversity.

KING COUNTY DOT

Traffic Engineer II—Prepare and review traffic studies and level of service analyses. Identify and recommend intersection and corridor improvements to improve safety and capacity. Assist in the development of the Regional Network Studies Program. Develop and implement coordinated/ Optimized and Transit Signal Priority (TSP) signal timing plans. Coordinate work efforts between King County and other jurisdictions. Knowledge of traffic engineering principles equivalent to a bachelors degree in civil engineering or in closely related field and two(2) years of progressively responsible experience at a level equivalent to an Engineer II required. For complete job announcement, visit the following web address:

<http://www.metrokc.gov/ohrm/jobs/assets/6-2-03/03SB3415.pdf>

Transportation Planner IV—Job No.: 03CY3229, Annual Salary: \$68,453.42 – \$82,754.88, Closes 7/3/03—This position will develop multiple programs and plans while developing transportation policy using highly specialized technical expertise. Provide leadership and serve as a unique resource for Transit's long term transportation needs. Projects include: Downtown Seattle Transit Tunnel closure, Metro's Six-Year Development Plan, Link Light Rail and coordination with the Seattle Monorail. See our website at www.metrokc.gov for a complete job description and application or call (206) 684-1179 for more information.

King County is an equal opportunity employer. Job announcements are available in alternative formats for persons with disabilities. 1-800-833-6388 TYY. Applications request line: 206-205-8782.

CITY OF SCOTTSDALE

Traffic Engineering Director—Scottsdale, Arizona, one of the nation's premier communities, is seeking a Traffic Engineering Director. The City is a vibrant full-service community with a population of 215,000 and a workforce of over 2,200. The Traffic Engineering Division has a current operating budget of \$1.5 million, a five-year CIP of \$31.4 million, and full-time staff of 10 employees.

Ideal candidates will be empowering



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To place your ad, e-mail your ad to john.kerenyi@kimley-horn.com. The deadline is the 28th of the previous odd-numbered month. The cost is \$6.00 per line, with a minimum cost per ad of \$100.00. Ads are also posted on our web site at www.westernite.org. More information is available on our Web site.

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leaders with excellent communication and team building skills, and proven traffic engineering professionals. A Bachelor's Degree in Traffic Engineering, Civil Engineering or a closely related field and substantial management experience in a complex traffic engineering environment are required. Registration as a Professional Engineer in the State of Arizona or the ability to obtain within one-year is required.

Salary highly competitive and negotiable, position is open until filled. The City offers an attractive compensation and benefit package. Submit cover letter with current salary, resume, and three work-related references to:

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Email: resumes@cps.ca.gov
Website: www.cps.ca.gov/shannon

CITY OF SAMMAMISH, WASH.

Senior Project Engineer/ Transportation—This position assists with the development, administration and implementation of the City's Transportation Program. Complete job description & city application form may be obtained by calling 425-836-7916 or www.ci.sammamish.wa.us EOE

CITY OF MORENO VALLEY

Senior Engineer (Public Works/ Transportation)—Salary \$5,459-6,967/mo. DOQ; excellent benefit package worth \$7,930/yr, and City paid PERS. If you are interested in working in a community with affordable housing and close the desert, mountains, beach and other local recreational areas consider working with us! This position serve as lead staff or supervise the following: development plan checks; traffic study review; traffic forecasting and analysis; traffic safety analysis; signal coordination; signal plan checks; signing and striping plan checks; grant applications; neighborhood traffic calming; circulation infrastructure planning, fee program implementation; access management; manage consultant contracts; prepare performance evaluations; prepare annual budgets for division work units; prepare and make presentations at City Council, Planning Commission, and Traffic Safety Advisory Commission meetings. Qualifications include a Bachelor's Degree in Engineering or a related discipline. Graduate coursework in Transportation and Traffic Engineering is desirable. Four years of professional engineering experience in transportation planning or traffic engineering, and

two years of supervisory experience. A certificate of registration as a Professional Traffic or Civil Engineer in the State of California is required. 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

AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA

Traffic Engineer

About the Position: We are seeking experienced Traffic Engineers to contribute to a variety of public policy, safety and legislative initiatives including our new School Site Traffic Safety Program. The successful candidate will be able to articulate and represent organizational and member interests, maintain close working relationships with public agencies and staff, work with Public Relations staff to obtain appropriate publicity, assist staff with traffic engineering and operational issues, perform field inspections, and represent the Club on traffic committees and similar groups. Experience in designing and implementing driver, bicycle and pedestrian safety programs is highly desirable.

Qualifications:

- Bachelor of Science degree in civil engineering or closely related field
- Current California registration in traffic engineering or a closely related engineering discipline
- Five or more years' experience in traffic engineering
- Excellent oral and written communication skills
- Ability to make persuasive public presentations
- Good interpersonal skills and consensus-building abilities
- Computer skills including Internet research and MS Word, Excel, & PowerPoint

How to Apply: Send resume to Personnel1@aaa-calif.com or fax to (714) 850-5058.

Reference: JD/TE

CITY OF MODESTO, CALIF.

City Traffic Engineer—The City of Modesto is a thriving, progressive community in central California built upon a legacy of agribusiness and vineyards. Its diversified economy supports a community of approximately 203,000 residents and is the largest city and seat of Stanislaus County. Modesto is also

the 15th largest city in California. This is an 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. The successful candidate will possess a blend of technical ability combined with superior supervisory skills. Minimum requirements include a Bachelor's degree, as well as four years of increasingly responsible professional traffic engineering experience, including supervisory or lead responsibility. (A Master's Degree in Transportation is desirable.) Requires a valid Certificate of Registration as a Traffic Engineer issued by the California State Board of Registration for Professional Engineers. Salary range is \$74,650-\$90,953 annually plus an excellent benefits package including PERS retirement. Position open until filled. Review of resumes to begin 8/8/03. Apply on line at www.ralphandersen.com. Request a detailed brochure call (916) 630-4900 or e-mail info@ralphandersen.com.

Sponsor a Student, Support Student Chapters!

Help invest in the future of our profession by joining others in supporting student attendance and participation at this year's ITE Annual Meeting in Seattle. Your financial contribution would help cover costs for student airfare, hotel, and conference registration. Contributors will be duly recognized at the conference. Interested firms or individuals should contact Jim Ellison, Pierce County, WA, at 253-798-7250 or jelliso@co.pierce.wa.us.

Sign of the Times



"Something tells me this mayor works odd hours..."

Submitted by Ed Krulikowski

Good Practices for Improving Safety at Intersection Locations

A One-Day Safety Workshop

About 65% of all crashes in urban areas, and 40% of all crashes in rural areas, occur at or near intersections or driveways. Safety improvements at these locations have always been a priority and pose a challenge for most transportation agencies in California. Because crashes are typically complex events, a great diversity of mitigation measures have been tried with varying degrees of success, including the so-called modern roundabout. This one-day workshop offers a range of guidelines, solutions, and strategies for decreasing conflicts and crashes at intersection locations, drawing on experiences in California, North America, and Europe. The workshop explores safety implications for motorists, pedestrians, and bicyclists in both urban and rural areas.

Topics include:

- Understanding sources of intersec-

- tion conflicts and crashes
- Safety at signalized and non-signalized intersections
- Safety and design of access points (driveways)
- Safety, design, and use of modern roundabouts
- Accommodation for pedestrians and bicyclists
- Land use designs to reduce crashes
- Good safety practices and case-studies

Instructors

Nazir Lalani, P.E., Principal Engineer, Transportation Department, Ventura County Public Works Agency—Mr. Lalani has won many awards in traffic

engineering and has held positions in cities and counties in California.

Philip Demosthenes, Colorado Department of Highways—Mr. Demosthenes is an expert in traffic safety and access management.

Workshop Registration and Fee

Seating will be limited to confirmed registrants only. Pre-registration is required. Early registration is strongly recommended. Classes fill quickly.

There is a fee of \$50. To register, please contact Jo-Elaine Morgan at (510) 231-5673 or jomorgan@uclink.berkeley.edu.

Locations:

San Diego

Thursday, October 9, 9 am–4 pm
Holiday Inn Mission Valley Stadium
3805 Murphy Canyon Road
San Diego, CA 92123
(Lunch is not provided)

Richmond

Thursday, November 6, 9 AM–4 PM
Richmond Field Station
1355 S. 46th Street, Building 454
Richmond, CA 94804

Legislative Update

by Walt Stringer, ITE District 6 Legislative Committee Chair

In California, the state TCRP funding freeze basically continues, with some emergency items funded recently, and CTC agenda items requesting either revenue neutral and/or innovative funding, plus administrative plan updates as well. The May 2003 “Revise,” or budget office deficit estimate, showed that the overall fiscal picture has not improved over prior estimates.

A key focus over the past few weeks was the May 14 release of the SAFETEA (or TEA-21 reauthorization) budget proposal by the administration, which triggers the legislative involvement by key House and Senate Committees with their own proposals, modifications, or both. Reportedly the initial proposal has met with largely negative reaction in both houses. The new legislation would extend from FY2004 through FY2009, since TEA-21 programs expire on October 1, 2003. In the aggregate, transit funding would be authorized \$45.8B over the entire period (roadway funding



was also lowered), increasing annually by about 2%. The proposal also revises the structure and identity of programs and formula categories, and adds programs such as 'New Freedom' (ADA-related), Indian Rural Transit, Intermodal Passenger Facilities, and National Parks Legacy. The debate will continue over the next few months, with the goal of passage by September.

In keeping with the federal emphasis on security, a total of \$2.2B in funding to state and local governments has been made available by the Department of Homeland Security, focusing on airports, bridges, tunnels, ports, highways, and urban transit. The grant criteria include high population density and critical infrastructure, and District 6 cities eligible for funds, after completing internal security assessments, include Los Angeles, Denver, San Francisco, Seattle and Portland.

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