

Westernite

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President's Message

It is an honor to be selected as your District president and I wish to thank all of you for your fantastic support and encouragement. I would especially like to thank my supervisors, Wayne



Tanda and John Fisher, for their understanding and encouragement. Randy McCourt's very capable leadership laid a lot of ground work last year, and I want to thank him for his exceptional vision and dedication as president. I am also very excited and pleased to have Dalene Whitlock as our new secretary-treasurer and Rory Grindley as our new District International Director.

Our career guidance committee, with the help of chair Jennifer Rosales, has established our District 6 Mentoring Program. At our next year board meeting we will select program coordinators whose responsibilities will be to promote the program, identify potential mentors and create an application process for those who wish to be mentored.

The District 6 Board members wish to thank John Kerenyi and Peter Koonce for their services producing our award-

(Continued on page 3)

What's In This Issue

| | |
|---------------------------------|---|
| July IBOD Meeting Highlights | 2 |
| New Feature: Your Local Leaders | 3 |
| Legislative Update | 5 |
| Section and Chapter Activities | 6 |
| Positions Available | 7 |
| Want to Be Technical Editor? | 9 |

To Simulate or Not To Simulate: That is the Question

Traffic Simulation in the San Diego Area (And Beyond)

By Erik Ruehr, P.E. (M)

This article summarizes the efforts of a group of ITE members in the California Border Section to understand the state of the art in traffic simulation. When this effort was initiated, we focused our attention in our home base of San Diego County, but we eventually broadened our study to gather information throughout District 6. Our sources of information included our own experiences, selected reference materials, a written survey of public agencies in the San Diego area, and an Internet-based survey of public agencies throughout ITE District 6. The group of ITE members who conducted this effort is known as the ITE California Border Section Highway Capacity Task Force.

The task force's complete report is available on the *WesternITE* website within the California Border Section area.

Background

Recent advances in computer technology and our understanding of traffic flow theory have led to the widespread creation and use of traffic simulation models by traffic engineers and transportation planners involved in the planning, operations, and design of transportation facilities. In addition to their usefulness in analyzing a unique set of conditions, most traffic simulation models include highly sophisticated displays that allow visual demonstration of traffic operations on a computer screen. Traffic conditions that could previously be described only in words or numbers can now be simulated on a computer and displayed so that a visual real-time picture of traffic conditions can be seen. This has enhanced the ability of people both inside and outside the transportation profession to visualize the results of future actions. Simulation results can be displayed in

public meetings, allowing decision-makers and the public a way to visualize traffic operations in ways that were not possible using conventional tools.

Because traffic simulation models have only come into widespread use in recent years, there are relatively few guidelines and standards to govern their use. While the transportation profession seems to be in agreement that traffic simulation models are highly useful tools, there are a variety of models available and a high potential for misuse and misinterpretation of results. In this environment, it is highly desirable that traffic engineers and transportation planners work together to share knowledge and educate each other on the potential advantages and pitfalls in the use of traffic simulation models.

Definition of Traffic Simulation Models

For the purpose of this article, a traffic simulation model is defined as a computerized analysis package that tracks the movements of individual vehicles in a model street network and quantifies the performance of the network by summing the results of individual vehicle movements. Examples of traffic simulation models include SimTraffic, CORSIM, VISSIM, and Paramics. Traffic models that aid in computational tasks but do not track individual vehicle movements (for example, Traffix or HCS) were not considered to be traffic simulation models for the purposes of this paper. Furthermore, regional travel forecasting models such as TransCAD, TP Plus, and EMME II are not considered to be traffic simulation models in this discussion.

The Changing World of Traffic Simulation

One of the limitations of an effort such as this one is that traffic simulation

(Continued on page 4)

International Director's Report: July Board of Direction Meeting



Pat Noyes, District 6
International Director

The International Board of Direction (IBOD) met on July 30 and 31, 2004, in conjunction with the Annual Meeting in Orlando, Florida. The three International Directors from District 6, Ray Davis, Pat Noyes, and Rock Miller, were in attendance. Other District 6 members present included Vice President Tim Harpst, Coordinating Council Chair Wayne Tanda, and Candidates for Vice President Rich Romer and Tom Clausen. District 6 International Director-elect Rory Grindley attended a portion of the meeting.

Workforce Development

The Board had an opportunity to focus a significant amount of time looking at the critical ("mega") issues facing the Institute in continuation of the strategic planning initiative of the past two years. One of the mega issues identified by the Board at the March meeting was workforce development. The Board worked through a Knowledge-based Governance and Decision Making process to explore the role of ITE in workforce development. A number of white papers were developed and presented to stimulate discussion and identify activities to be pursued by the Institute:

- "Transportation Education and Workforce Development," Dr. John M. Mason, Jr.
- "Attracting Young People into the Transportation Profession," Dr. Martin E. Lipinski
- "Workforce Development From the Public and Private Sector Perspective," David R. Gehr
- "Developing Tomorrow's Transportation Workforce," Joseph S. Toole and Clark C. Martin

These papers were developed as part of a session at the Annual Meeting. Some of the key themes presented in these papers included:

- Shrinking pool of transportation professionals
- Necessary skill sets are not being developed
- Agencies are significantly under-investing in workforce training
- Succession planning should include all levels of an organization
- Capacity to train future transportation professional is inadequate

- Knowledge needs exist in both the public and private sectors
- Public/private partnerships are essential to address workforce development
- Students in the United States lag behind the rest of the world in math and science

What can ITE do? The following possibilities were discussed by the Board:

- Provide technical content/resources
- Increase certification programs
- Identify the range of skills needed in today's market environment
- Facilitate critical partnership to deliver the professional development program

These options were discussed in terms of the potential roles ITE could take in pursuing them, including convener/integrator, advocate/champion, leader, provider, and partner. The Board asked staff to collect additional information on what it would take to assume some of these roles and will discuss this issue further at the October Board meeting. If you have input you would like to share on this issue, please contact one of the District 6 International Directors.

Budget Update

Vice President Tim Harpst presented an update of the 2004 budget. At this time, the Institute is within its current budget. It was noted that the current membership revenues are below budget projections. Sections and Chapters are urged to review the lists of members who have not renewed their membership to help address issues and encourage the member to bring his/her membership current. The Board approved a minimal dues increase for 2005, averaging \$5 in each of the membership categories.

Current ITE Program Activities

Gene Wilson, Transportation Professional Certification Board Chair, provided an update on the Certification Board's activities. There are currently 935 PTOEs. Wayne Tanda, Coordinating Council Chair, provided an update on the Technical Councils. There are currently 140 projects listed in the ITE Coordinating Council Project Directory, available on the ITE website. He reported that Nazir Lalani

was selected as the recipient of the Coordinating Council Special Achievement Award for outstanding volunteer. The Board accepted a recommendation to restructure the Management and Operations Task Force and the ITS Council by combining them into a new Management and Operations Council, with ITS as a key component.

ITE staff provided updates on current program activities. Shelley Row announced that there is currently a fourth Professional Development Learning Series module available on CD-ROM, "Managing High Technology Projects in Transportation." Four more modules are anticipated by the end of 2004. ITE is undertaking a Traffic Signal Operation Self-Assessment, sponsored by the National Transportation Operations Coalition (NTOC) with support from FHWA. The objectives of the assessment are to define best practices, highlight improvement opportunities, communicate traffic signal operations needs to management, and support additional investment in traffic signal operations. The results will be compiled into a report that generalizes the state of traffic signal operations, and individual jurisdictions will be kept anonymous. If you receive a request to participate, please complete the assessment. It will provide invaluable information on points of focus for enhancements.

The Board took action to revise the Board Procedure on the Responsibilities of the Nominating Committee for International Vice President. The action added language that when the President and Vice President are from the same District, preference will be given to candidates from other Districts during the nomination process for Vice Presidential candidates. This change will affect District 6 this year as Tim Harpst will be the President in 2005 and Rich Romer was elected as Vice President for 2005; therefore, preference will be given to candidates outside District 6 in recommending candidates to run for Vice President in 2005.

Congratulations to Rich Romer on his election to 2005 International Vice

(Continued on page 5)

President’s Message

(Continued from page 1)

winning newsletter, *Westernite*. Peter is stepping down as Technical Editor and we are looking for a new Technical Editor. Please contact me by October 15th if you are interested in this position.

I am also pleased to announce that Michelle Norsten, from 3M Traffic Safety Systems, has agreed to serve as Vendor Chair for District 6. She will be assisted by Paul Lamb, also from 3M Safety Systems, who will serve as Vice-Chair. We look forward to working with Michelle and Paul in making our vendors exhibition at the next annual meeting a great success.

Having been involved with local arrangements committees, I know how much hard work it takes to pull off a successful annual meeting. Bob Grandy, Steve Brown, and the rest of the L.A.C. did an outstanding job putting together the annual meeting in Sacramento this year.

An emailed survey was conducted with attendees of the Sacramento meeting. Judging from the comments of those who have responded, all indications are that the meeting was very successful, and over 65% of the respondents indicate they plan to attend the next meeting in Montana.

We are in the process of establishing the first District 6 student endowment fund. The interest from this fund is to be used to offset the costs of travel and related expenses for students attending the District 6 ITE annual meetings. At the present time, about \$10,000 is needed to offset these costs for the 50 students who are expected to attend the annual meetings. We estimate that the fund needs to have a principle of at least \$350,000 to allow adequate funding. This is a very achievable goal, since there are over 4,000 members in District 6 and if every member would make a one-time donation of \$100 our goal would be reached. At this time we already have over \$15,000 in commitments from our members. We are very fortunate to have Pat Gibson in charge of administering

this fund. Please keep this fund in mind if you or your estate wishes to create a charitable giving plan. It will allow us to attract, recruit, and retain the best and brightest students to our profession.

Success of District 6 depends on the success of the sections and chapters that make up our District. We are indeed fortunate to have so many outstanding individuals who volunteer their time to serve as officers for the different chapters and sections. This month I would like to introduce you to the elected leadership of the New Mexico and Southern California Sections. The New Mexico Section is led by Eric Hawton (President), Tom Blaine (Vice President), Afshin Jian (Secretary-Treasurer), and Kurt Thorson (Past President). The Southern California Section President is Glen Pedersen, Raymond Lee is the Vice-President, and Sunil Rajpal is the Secretary-Treasurer.

I hope to hear from all of you so that we can make District 6 even better. Together we are the BEST

Get to Know Your Local Leadership



New Mexico Section

The New Mexico Section elected the following officers for 2004-2005:



Kurt Thorson, Past President *Eric Hawton, President* *Tom Blaine, Vice President* *Afshin Jian, Secretary-Treasurer*



Southern California Section

The Southern California Section elected the following officers for 2004-2005:



Left to right: Sunil Rajpal, Secretary-Treasurer; Raymond Lee, Vice President; Glen Pedersen, President; Erik Zandvliet, Past President; Monica Suter, 2nd Past President

Feature Article

(Continued from page 1)

models are continually being updated. Therefore, any comments in this paper about a particular simulation model may no longer apply if a new version is created by the developer. Furthermore, new models may be created that supercede the popularity of the traffic simulation models described here. While these limitations exist, the task force believed that the topic is important enough to create this description of the state of traffic simulation as it exists in late 2003 and early 2004.

International Research on Traffic Simulation Models

A wealth of information on traffic simulation models is available on the Internet and in various research conducted by the transportation community. Anyone with access to the Internet can do their own research by doing a search on traffic simulation using an Internet search engine. In addition, there are on-line sources of information specifically devoted to transportation, such as the TRIS database, available on-line at <http://99.79.179.82/sundev/search.cfm>.

The task force was aware of two agencies that have published or are in the process of publishing traffic simulation guidelines. The California Department of Transportation (Caltrans) has published a report on traffic simulation guidelines (Guidelines for Applying Traffic Microsimulation Modeling Software, California Department of Transportation/ Dowling Associates, September 2002) and it is available on the Internet at <http://www.itc-world.com/library.html>. The Federal Highway Administration is in the

process of preparing similar guidelines, but they were not yet published as of the writing of this article.

Advantages and Disadvantages of Traffic Simulation

Simulation models have the following advantages as compared to more traditional capacity analysis procedures:

- Ability to model an entire street network or facility and observe the effect of changes on one part of the network to the performance of the entire network.
- Ability to model the effects of queued vehicles on the performance of the facility. This includes simple queuing situations, such as short turn lanes, as well as more complex situations, such as ramp meters and the queuing of vehicles from a signalized intersection into an adjacent intersection.
- Ability to model unusual geometric or traffic control features (such as roundabouts, transit signal priority treatment, and pedestrians) that are not handled in traditional methodologies.
- Animation allows non-technical audiences to visualize the potential results of alternative traffic scenarios.

Despite their strengths, simulation models have certain disadvantages:

- A great deal more time is required to properly analyze a problem with simulation models than with more traditional methodologies.
- Simulation models typically require more input data than traditional methodologies.
- Small errors in setting up the parameters for the simulation can lead to large errors in the overall results.
- It is difficult to determine the accuracy of traffic simulation models. While all of the major software models currently in use are believed to be valid, there has been relatively little accuracy-testing done by the transportation profession. In addition to the question of whether the software is accurate, there is also a question of whether the analyst has correctly applied the software. Accuracy is also a question

Table 1: Survey Results

| | | | |
|--|-------------|----------|------------|
| 1. Which of the following traffic simulation models does your agency accept for traffic studies done in your jurisdiction? (Check all that apply.) | | | |
| 90 (45%) | SimTraffic | 48 (24%) | CORSIM |
| 37 (18%) | VISSIM | 11 (5%) | Paramics |
| 4 (2%) | Integration | 1 (<1%) | TEAPAC |
| 1 (<1%) | FREQ | 3 (1%) | TRANSYT-7F |
| 3 (1%) | HCS | 2 (1%) | EMME/2 |
| 1 (<1%) | HICap | 1 (<1%) | Traffix |
| 2. Which of the following traffic simulation models does your agency own? (Check all that apply.) | | | |
| 85 (57%) | SimTraffic | 29 (20%) | CORSIM |
| 12 (8%) | VISSIM | 7 (5%) | Paramics |
| 3 (2%) | Integration | 1 (<1%) | TEAPAC |
| 3 (2%) | FREQ | 2 (1%) | TRANSYT-7F |
| 2 (1%) | HCS | 1 (<1%) | EMME/2 |
| 1 (<1%) | HICap | 1 (<1%) | HCM/Cinema |
| 1 (<1%) | SIDRA | | |

in the use of more traditional methods, but they are simpler, easier to check, and have generally been in use in the profession for a much longer period of time.

- Because most simulation models use random number generation, the results will vary slightly for each separate run of a traffic simulation model.

ITE District 6 Survey

In the fall of 2003, a survey was conducted of ITE members who are employed by public agencies within ITE District 6. The survey was initiated by the task force and conducted by ITE Headquarters staff, who created an Internet-based survey site and sent an email requesting a response to the survey. The email was sent to 1,235 ITE members; 117 responses were received, representing eleven of the thirteen states in District 6. A summary of the results of the survey is shown in Table 1.

Conclusion

This article presents a summary of the current usage of traffic simulation models in the San Diego region and beyond. Key conclusions that can be drawn from this study include the following:

About the Author:

Erik Ruehr, P.E., is Director of Traffic Engineering for VRPA Technologies in San Diego, California. He has over twenty years of experience in transportation engineering and he is registered as a professional engineer in several states. Mr. Ruehr is a graduate of the University of Michigan, where he earned Bachelor's and Master's degrees in Civil Engineering. He is a Member of ITE and a past president of the California Border Section.



Feature Article *(continued)*

- Traffic simulation models continue to be created and those that are in use undergo continuous changes as developers of the models work to create the best possible product. Any of the discussion in this paper that is specific to a particular simulation model is subject to change as that model is revised and improved.
- According to the surveys conducted as part of this study, the most widely used simulation model in the San Diego region and in the Western United States is SimTraffic, followed by CORSIM, VISSIM, and Paramics. Many people who took part in this effort believe that there is no one traffic simulation model that is preferred for all situations and that all models have specific advantages depending on the particular traffic situation to be analyzed.
- While traffic simulation models offer significant advantages over traditional analysis methods in solving certain transportation analysis problems, they can also be misused and misinterpreted. The experienced analyst working with a particular simulation model will generally come to know its strengths and weaknesses through its application on a variety of transportation problems.

July IBOD Report

(Continued from page 2)

President. Congratulations also to Tom Clausen who represented District 6 well in his run for Vice President. We appreciate the time and dedication Rich and Tom provided the Institute in their campaign.

Upcoming Meetings

Please mark your calendars for the upcoming Technical Conferences and Annual Meetings:

Technical Conferences:

- February 27–March 2, 2004, Las Vegas, Nevada (Theme: Management and Operations)

Annual Meetings:

- August 7-10, 2005, Melbourne, Australia
- August 6-9, 2006, Milwaukee, Wisconsin

If you have any questions about the Board's activities or any other questions about the Institute, please feel free to contact any of your District 6 International Directors.



Call for Abstracts for 2005 District 6 Annual Meeting



Please submit abstracts (250 words max.) in PDF or Microsoft Word format, by January 14, 2005, to Robert Marvin, Annual Meeting Technical Chair, at marvin@enginc.com; or mail to:

Annual Meeting Abstracts
c/o Robert Marvin, Marvin & Associates
1260 S. 32 nd St. West
Billings, MT 59108

Visit www.westernite.org for more info.

Legislative Update



Walt Stringer,
District 6 Legislative
Committee Chair

As this column is written in mid-August, both the federal and California state legislatures are in recess, but there are a few updates to report from activity earlier this summer: At the federal level, funding continues at earlier TEA-21 levels since Congress passed Continuing

Resolutions valid through the end of September (slightly different dates for highways and transit). Conferees continue to work on finding mutually-agreeable levels for the six-year reauthorization. As of late July, the

Senate proposed total was just under \$300B, while the House number was around \$280B, and the White House altered its earlier position (\$256B) and was reportedly agreeable to the House number. Other funding terms and provisions will accompany whatever agreement is reached, and several transportation-related appropriations bills are also slated to be finalized after Recess.

In California, a supposedly final budget arrangement in late June fell apart, which led to some noisy politicking during July, which ultimately led to a somewhat higher final budget which was approved in early August. In terms of transportation funding, as contained in Senate Bills 1098 and 1099, the bottom line is that transportation funding should resume (via CTC allocation processes



which have been frozen for over 18 months), by virtue of anticipated tribal gaming revenues replacing some transportation funds diverted to the state General Fund. However, the receipt and use of tribal gaming revenues is contingent on voter defeat of two Propositions on the November ballot, and if that does not occur the transportation funding picture will again become tenuous. There were other internal budgetary transfers as well, which should help provide funding soon.

Section and Chapter Activities



Hawaii Section

May Meeting

The May luncheon was held on the 20th at the office of Belt Collins in Honolulu. The featured speaker was Lowell Chun, Chief of the Community Actions Plans Branch of the City and County of Honolulu, who spoke about the City's update to the Primary Urban Center Plan. The plan, one of eight for the Island of Oahu, is a policy plan started in 1995 that outlines methods for intelligent growth for the primary urban center and is in line with the policies outlined in the General Plan for Oahu. The General Plan directs growth to two main areas on Oahu, the primary urban center and Ewa, in an attempt to maintain the rural areas. Its recommendations include the establishment of an urban growth boundary and generalized land use framework, enhancement of the urban landscape, provision of a range of housing choices, promotion of convenient travel choices, and development of attractive outdoor areas. Implementation of the plan will begin upon adoption by City Council.



Cathy Leong, President



New Mexico Section

June Meeting

Eric Worrell, with the FHWA, presented "Context Sensitive Design, A Federal Perspective," to a group of 36 Section members and guests. Mr. Worrell explained that the goal of context-sensitive design is to integrate the planning, engineering, and environmental disciplines into the entire process of developing a highway. By involving all disciplines at all stages, the functionality is maximized while the impact is minimized. The FHWA has published numerous resources online at: <http://www.fhwa.dot.gov/csd/>

July Meeting

Michael Platt, with United Rentals, Highway Technologies Inc., presented a turnkey ITS (Intelligent Transportation Systems) application for work zones. The system utilizes a series of sensors to detect traffic flow and alert motorists to current conditions such as congestion and delays. A central system, consisting of a central computer and software application, monitors and analyzes data from the sensors. Visual verification of conditions is accomplished with the use of images from system cameras. Algorithms determine

which message signs, advisory radios and/or beacons to update based upon the current traffic conditions. The system allows for manual override of data and messages for emergency or special circumstances as warranted. Communication of data between the devices and the central computer is typically sent over a communication system that is also designed and provided as part of a turnkey ITS solution. Optionally, the system can include a real time project-specific or corridor-specific Web site for private or public viewing, email and pager alerts to project team members, and operational services and maintenance.

Also at the meeting, election results were announced with the following outcome:

- President: Eric Hawton P.E. PTOE
- Vice President: Tom Blaine P.E. PTOE
- Secretary/Treasurer: Afshin Jian P.E.

On July 15, 12 members and guests of New Mexico ITE ventured out on a field trip to the PNM San Juan Power Generating Station, near Farmington, New Mexico. The event was coordinated and hosted by Steve Krest and Charity Fechter, both with the city of Farmington. We met for a quick lunch and then carpoled out to the facility. We were given a VIP tour of the coal fired generating station which supplies power to a great deal of New Mexico and adjoining states.



Tom Blaine, Vice President

New Vendor Chair Appointed

District 6 President Zaki Mustafa announced that Michelle Norsten from 3M Traffic Safety Systems in Santa Monica has accepted an appointment as the District 6 Vendor Chair. She will be assisted by Paul Lamb, also with 3M Safety Systems, who will serve as Vice Chair. Together they will be responsible for representing vendor community's interests in District 6.

Free Systems Engineering Training

October 6-7 in Modesto, CA; October 19-20 in Ventura, CA

Fundamentals of Systems Engineering (TE-21) training, offered by UC Berkeley with funding from Caltrans and FHWA, will enable you to implement ITS projects in compliance with federal requirements.

To register, visit www.techtransfer.berkeley.edu

Training is free to all California public agencies. Check the website above for additional dates and locations. Agencies can also request free, on-demand, on-site training. Contact Michele Cushnie at the Technology Transfer Program at mcushnie@berkeley.edu or 510-231-5674 for details.

Positions Available



**CHS Consulting
Group**

Transportation Planner/Engineer (Full-Time)—CHS Consulting Group, a fast-growing transportation planning and engineering firm in SF and Oakland CA, has immediate openings for one mid to senior level transportation planner and one mid to senior level traffic engineer positions. Candidates should have at least 5 years experience with strong analytical, computer, written, and communication skills. Candidates with experience in HCS, EMME2, TP+, SYNCHRO, CORSIM, and VISSIM are preferred. The ideal candidate for the traffic engineer's position should be a licensed TE or CE in the State of California or is capable of obtaining the license 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. We offer competitive salary and benefits.

Send resume and cover letter to CHS Consulting Group, 500 Sutter Street, Suite 216, San Francisco, CA 94102 or email to or fax to (415) 392-9788. Any question regarding this offer, please call Ms. Williams at (415) 392-9688. EOE

CITY OF ANCHORAGE

Assistant Traffic Engineer (1-3 Positions)—Salary: \$47K-\$66K—Seeking Traffic Signal System Engineers. Must have skills to operate a 253 traffic signal system. Develop and review signal timing plans, designs, operational changes, and traffic studies. Requires a Bachelor's degree in Traffic, Electrical, or Civil Engineering, or related, and 1 year minimum progressive experience in traffic engineering or related field. Master's degree in a related engineering field may substitute for experience. Obtain minimum qualifications, requirements, duties, and how to apply from the MOA Employment

Office by: e-mail
WVER@ci.anchorage.ak.us; web
www.muni.org/erd/; ph 907-343-4443; or
fax 907-343-4511. EOE

SACRAMENTO COUNTY

The Sacramento County Department of Transportation is now accepting applications for:

*Associate Civil Engineer
(Highway Option)*

Approximate Monthly Salary:

\$5,409.66 - \$6,260.52 + exc. benefits

Min. Requirement: A valid cert. of registration as a Civil Engineer issued by California Board of Registration for Professional Engineers. See job announcement for additional information and supplemental questions.

Contact Doug Maas @ (916) 875-5545 or visit www.sacdot.com for more information on this position.

Application and Info at:

Sacramento Co. Employment Office
609 9th St., Sacto, CA 95814

Ph: (916) 874-5593

Apply on-line at

www.saccountyjobs.org

EOE

HEXAGON

Traffic Engineer/Project Manager—Hexagon Transportation Consultants, Inc. is seeking an experienced Traffic Engineer/Project Manager to work in its Sacramento office. Hexagon Transportation Consultants is a full-service transportation planning and traffic engineering firm with offices in San Jose and Sacramento, California and Phoenix, Arizona. We are seeking a senior-level traffic engineer with experience in a wide range of transportation topics including traffic impact studies, traffic forecasting and modeling, traffic signal design, parking studies and site design evaluation.

The ideal candidate will have a strong background in project management and budgeting, a thorough understanding of the principles and standards of the traffic engineering profession, and a proven track record in the consulting field. Must have experience with the Highway Capacity Manual, HCS, Synchro and Traffix software, Highway Design Manual and the MUTCD. Experience with travel demand

modeling software is a plus, but is not required. Registration as a Traffic or Civil Engineer in California is desirable, but not mandatory depending on experience and qualifications. Candidate must possess excellent written and verbal communication skills, an entrepreneurial attitude, and be a supportive team player.

The Hexagon office is located in Folsom, California, approximately 20 miles east of downtown Sacramento. Folsom is ideally located on the American River, and is characterized by beautiful open space, excellent schools and a wide range of affordable housing opportunities. Hexagon Transportation Consultants offers an excellent compensation and benefits package. Salary for this position is negotiable depending upon qualifications.

To apply, please submit a resume and cover letter via mail or e-mail to:

John Dillon, Principal Associate
Hexagon Transportation Consultants
110 Blue Ravine Road, Suite 103
Folsom, California 95630
Jdillon@hextrans.com

For additional information on the firm or the position, please call Mr. Dillon at (916) 355-0110.

CITY OF FREMONT

Associate Transportation Engineer—Annual salary: \$80,568 - \$97,930 DOQ.

The City of Fremont is seeking an individual who will perform professional engineering work in planning, design, operations, inspection, and administration of public works projects with emphasis on traffic and transportation improvement projects. Provide technical and functional supervision over technical engineering staff. Manage the operations and maintenance of the City's 146 traffic signals, including the annual traffic signal coordination program to implement new or updated coordinated signal timings. Assist in the oversight of the operation and management of the City's traffic management center that includes a central traffic signal system, CCTV cameras, and a communications plant consisting of fiber optic and copper cables. Manage and administer the traffic signal maintenance contract. Serve as Project Manager for both City and consultant-designed transportation improvement projects. Prepare applications for Regional, State,

**Tell them you saw
their ad in Westernite!**

Positions Available

and Federal grant funding and administer existing and new grant programs. Respond to public inquiries. Coordinate with and advise design and construction engineering staff on traffic issues associated with capital improvement projects. For more information, please visit our website at www.fremont.gov. This position is open until filled.



Iteris, Inc. is an industry leader in Intelligent Transportation Systems, traffic engineering and transportation planning. Our firm is nationally recognized as an authority in traffic operations, traffic control systems, Advanced Traffic Management Systems (ATMS), Commercial Vehicle Operations (CVO) and Rural ITS. We have assembled a "Dream Team" of the brightest, most innovative ITS specialists, traffic engineers and transportation planners in the industry. We are seeking key Transportation Engineers to join our developing team.

Based in Anaheim, *Transportation Engineer* (#6040) will serve as Task Leader/Project Engineer of planning and design of ITS elements and communications systems as well as performing tasks requiring general traffic engineering and traffic operations project components. The ideal candidate will have a BS degree and at least 5 years experience in traffic engineering and design principles. In-depth knowledge and hands-on experience of Micro station and AutoCAD is a must. We are also seeking individuals who are familiar with Caltrans and Los Angeles County design standards.

We are also seeking a *Senior Transportation Engineer* (#6041) for the

Anaheim office. This position will serve as Project Manager/Task Leader/Project Engineer with planning, design, implementation and integration of ITS and communications systems as well as performing tasks requiring general traffic engineering and traffic operations project components. The qualified individual will assist with business development activities including outreach, proposal preparation and interviews/negotiations. We are seeking candidates with a BS degree and 5-10 years experience. Knowledge of L.A. and Orange Counties and the Inland Empire Area is key, as well as experience in business development in ITS and traffic engineering. Conversant and familiar with Micro station and AutoCAD preferred.

Our Sacramento, California office is seeking a *Transportation Engineer* (#6042) that will serve as project engineer in the area of traffic engineering and traffic operations. The successful candidate will have BS or MS degree in engineering and at least 5 years experience in traffic and transportation engineering, traffic operations, and transportation planning fields. Responsibilities will include: area-wide transportation/traffic studies, traffic signal design and timing, as well as overall traffic operations and ITS design and engineering. Responsibilities also include field checks, development of signal timing plans, traffic signal plan development, ITS planning and design including specifications and estimates. The candidate should also have working knowledge of Synchro, CORSIM, AutoCAD, Microstation and VISSIM. This position will also assist with business development activities including outreach, proposal preparation and interviews/negotiations. Qualified candidates should also have knowledge of the Sacramento Area and have experience in business development for traffic engineering.

All positions desire an EIT or Professional Engineer registration in California.

If you are interested in joining the "best of the best," visit our Website for more detailed information about each position as well as exciting background about our company: www.iteris.com. Send all

resumes (Word/text format) including position title to Anne Bologna, Iteris, Inc. E-mail: jobs@iteris.com.

LOS ALAMOS COUNTY, N.M.

Transportation Department Director
\$77,357 to \$116,035, Added 7/16/04

Notice To All Applicants:

Resume, along with your cover letter and list of references, are to be submitted to Los Alamos County, Human Resources Division, P. O. Box 30, Los Alamos, NM 87544. The information from your resume will be used to determine if minimum qualifications are met. Be sure to include your educational background and authorization for the County to verify should you be the successful candidate. A County application is not necessary in order to apply, but you may be required to complete one at a later date. Additional information may be obtained from our website at www.lac-nm.us and our job line at 505-662-8039. This position is open until filled.

Minimum Qualifications:

A Bachelor's Degree from an accredited university in Public Administration, Transportation Planning, Engineering or a closely related field, plus eight years of progressively responsible experience in transportation, transportation planning, and field operations or an equivalent combination of training and experience, including three years of supervisory experience.

Must establish residency in Los Alamos County within ninety days.

Must possess or have ability to obtain and maintain a valid New Mexico Class "D" driver's license within ninety days of employment.

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Peter Koonce, the Technical Editor for the past two years, has decided to resign as Technical Editor of *WesternITE* to pursue other opportunities. Therefore, we are now seeking a worthy successor. The Technical Editor is responsible for soliciting and editing technical articles, maintains the Professional Services Directory, and assists with tracking accounts payable. If you are interested in being considered, please contact the Managing Editor, John Kerenyi, or the President, Zaki Mustafa. Contact information is available on the back page of this issue.

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