

CIVIL ENGINEER



T H E N E W S L E T T E R

Tacoma ♦ Olympia Section of the
American Society of Civil Engineers



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CIVIL ENGINEERS MAKE THE DIFFERENCE!

THEY PROVIDE THE QUALITY OF LIFE!

The **Civil Engineer Newsletter** is published for the Tacoma/Olympia Section of the American Society of Civil Engineers monthly from September to June.

To submit ads or articles of interest, please contact the current President of the Section or the Editor. Information must be submitted not later than the 15th of the month prior to publication.

For address changes and corrections, contact the Editor.

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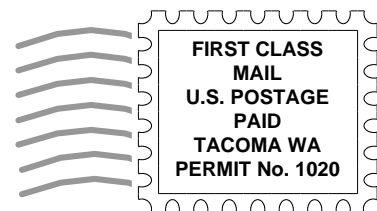
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CIVIL ENGINEER
The NEWSLETTER

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JUNE MEETING



Pierce Transit Parking Garage Tacoma Dome Tuesday, June 9, 1998 Worthington Center, Saint Martin's College, Lacey

Social: 6:00 P.M.
Dinner: 6:30 P.M.
Program 7:30 P.M.

The dinner cost is \$20.00 for members, and students are half-price.

The program is free to all.

Presented by **Abdul Chahim and Mike Lanier of
Berger/ABAM** in Federal Way

The recently completed parking garage near the Tacoma Dome was not built just to provide more parking for the restaurants and shops of Freighthouse Square. It's really just the initial phase of a larger project incorporating regional and local transportation by bus, car, and rail. Right now, the station is home to the popular Seattle Express Bus Service (which, in case you didn't know, now runs on weekends as well).

Come hear what's been done (environmental clean-up and initial structure), what's underway, and what's coming in the future. I've asked that any "lessons learned" be included, because my favorite part is finding out what didn't go well and how to avoid doing it myself.

To St. Martin's Worthington Center

From Tacoma: I-5 south to Martin Way (Exit 109); bear right to College Street (the next signaled intersection); turn left on College; travel south to Pacific Avenue; turn left on Pacific to the entrance to Saint Martin's Pavilion on the left.

From Olympia: Take either Pacific Avenue to Saint Martin's or I-5 north to Sleater-Kinney/College Street (Exit 108); continue to College Street; turn right and proceed to Pacific Avenue; turn left on Pacific to the entrance to Saint Martin's Pavilion on left.

Reservations

Reservations for dinner are **Really Needed** or we end up without enough plates and without enough seats. For your reservations please call **Chris Beckman** at (253) 798-3557 or **Mark Leingang** (360) 586-6163 by the close of business, **Friday, June 5, 1998**. This will let us tell the cooks how many to expect. You can also make reservations by accessing the Tacoma-Olympia Section Home page at: <http://www.asce.org/gsd/sections/tacoly/tacoly.htm>

If you forget to call in your reservation on time, call anyway. It's better to call late than not to call at all and just show up. Members with reservations who do not attend will be billed.

It is very important to make firm reservations for the section meetings for the following reasons:

- To make sure that we have a place set for everyone.
- So the presenter can bring enough hand-outs for all who are present.
- We (section) give an advance count of attendees so the proper amount of food will be prepared.
- We are charged for each person we make a reservation for.
- If the meeting is canceled, we can notify you.

Positions Wanted/Open:

Resume Policy: Our section newsletter will provide free space for ASCE students and members to advertise their qualifications. The resume information needs to be received by the 20th of the month to make the next newsletter. If you still don't have a job, send it again the next month. The resume information is limited to:

- ◇ Name
- ◇ Engineering Degree/Year
- ◇ Position Desired
- ◇ Years of Related Experience
- ◇ Membership Status, ASCE section
- ◇ Mailing Address
- ◇ Daytime Phone

Please send information to Rebecca Vader, 2917 South 17th Street, Tacoma, WA 98405
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President's Corner

REBECCA VADER

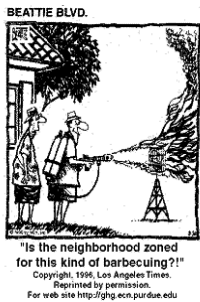
The National ASCE Board of Direction recently passed an initiative to designate the master's degree as the first professional degree for civil engineering. At the spring meeting, the Board charged the Education Activities Committee with developing a policy and an implementation plan for the first professional degree in civil engineering.

However, ASCE is not a licensing body and, in my opinion, it should refrain from trying to act like one. The requirements for professional licensing should be subject to the law-making process of the community in general, not by the licensees. This helps prevent self-regulation from becoming self-serving.

Rebecca Vader, President
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Summer Recess

The section will not hold business or society meetings in July and August. In light of the upcoming summer days, this article is offered. It pokes fun at the major demographic of this membership, so if you're feeling sensitive today you may want to skip it. Unfortunately, the author is unidentified. The article has been edited for space.



Our subject today is lighting charcoal grills. One of our favorite charcoal grill lighters is a guy named George Goble (really!!), a computer person in the Purdue University engineering department. Each year, Goble and a bunch of other engineers hold a picnic in West Lafayette, Indiana, at which

they cook hamburgers on a big grill. Being engineers, they began looking for practical ways to speed up the charcoal-lighting process. "We started by blowing the charcoal with a hair dryer, then we figured out that it would light faster if we used a vacuum cleaner." If you know anything about (1) engineers and (2) guys in general, you know what happened: The purpose of the charcoal-lighting shifted from cooking hamburgers to seeing how fast they could light the charcoal.

From the vacuum cleaner, they escalated to using a propane torch, then an acetylene torch. Then, compressed pure oxygen, which caused the charcoal to burn much faster, because fire is essentially the

rapid combination of oxygen with a reducing agent (the charcoal). We discovered that a long time ago, somewhere in the valley between the Tigris and Euphrates rivers (or something along those lines).

By now, Goble was getting pretty good times. But in the world of competitive charcoal-lighting, "pretty good" doesn't cut the mustard. Thus, Goble hit upon the idea of using--get ready--liquid oxygen!--the form of oxygen used in rocket engines; 295 degrees below zero and 600 times as dense as regular oxygen. In terms of releasing energy, pouring liquid oxygen on charcoal is the equivalent of throwing a live squirrel into a room containing 500 Labrador retrievers. On Goble's Web page you can see actual photographs and a video of Goble using a bucket attached to a 10-foot-long wooden handle to dump 3 gallons of liquid oxygen (not sold in stores) onto a grill containing 60 pounds of charcoal and a lit cigarette for ignition.

It's the most impressive charcoal-lighting I have ever seen, with a large fireball that, according to Goble, reached 10,000 degrees Fahrenheit. The charcoal was ready for cooking in this has to be a world record--3 seconds.

There's a photo of what happened when the same technique was used on a \$2.88 discount-store grill. All that's left is a circle of charcoal with a few shreds of metal in it. "Basically, the grill vaporized," said Goble. "We were thinking of returning it to the store for a refund." Looking at Goble's video and photos, I became, as an American, all choked up with gratitude at the fact that I do not live anywhere near the engineers' picnic site. But also, I was proud of my country for producing guys who can be ready to barbecue in less time than it takes for guys in less-advanced nations, such as France, to spit. Will the 3-second barrier ever be broken? It's something for all to ponder this summer as we sit outside, eating our hamburgers and every now and then glancing in the direction of West Lafayette, Indiana, looking for a mushroom cloud. Visit George's Web Site at <http://ghg.ecn.purdue.edu>.

Book Review

Note: This article was written for a non-professional reader, and some editing was done to reduce the amount of background text.

Working Smart: Easy-to-use Survey Monument Database Now On the Web By Grace Eubanks



Professionals who need to know the accurate location of points in Washington State's geography have a handy new tool - thanks to WSDOT's Geographic Services Survey Section. The agency's database of survey monuments now is available via the department's internal and external homepages on the World Wide Web. An extra bonus is that WSDOT's Internet-accessible catalog is programmed in a new style that makes it far more quick and convenient to use than other databases.

continued next page

In the past, survey monuments were mainly used to determine the latitude and longitude of another site. Technology developed in recent years - such as the Geographic Information System (GIS) and Global Positioning System (GPS), the federal space-based, radio-navigation system that gets its information from 24 satellites-now makes it possible to more accurately determine the horizontal and vertical (spatial) location of a geographical point.

"What makes our database so convenient," said Survey Section Manager Kurt Iverson, "is that you don't have to download the whole database to use it. You can download an individual station." The other notable thing about the Geographical Services database on the Internet is that it got there without the need for new budget dollars. "First, we used Quality processes to trim down our operational costs," reported Iverson, "then we used the savings to do this."

"Everyone here is really proud of what we did," he added. The Section's Office Engineer, Kurt Williamson, and Iverson said that special credit for this achievement also goes to Nadine Jobe, Mark Solie, Wayne Szdtowski, Dave Palmer and Zachary Fu of WSDOT's Management Information System office.

The Survey Monument Database can be accessed at: (internal users) under Field Operations Support Service Center - or (by anyone) at www.wsdot.wa.gov/monument.

ASCE Activities

Local



The May lunch meeting was attended by 27 people, and was promising enough that we may do it more regularly. We appreciate the patience of all the attendees, and promise to make improvements in timing before we try this again.

National

ASCE elections usually occur during our summer recess. This year the ballot will feature a choice for the position of National President-Elect., an official nominee, selected by the long-standing rotation tradition.

The following is a campaign statement from the petition nominee. **Ms. Patricia Galloway**, F.ASCE has received full support from the New Jersey Section of which she is a member.

ASCE's vision is to be the worldwide leader for excellence in civil engineering. This will require changes within our Society in its governance, the roles and responsibilities of the Board and officer, and programs in order to meet the Strategic Plan goals. Another major change is the formation of Institutes. The Institutes embrace the team concept, which will foster a Society for civil engineering. Technical excellence, business leadership and global competitiveness are my agenda items which will ensure these changes are accomplished. ASCE's vision can only be fulfilled with the involvement of our Sections and Branches in partner-

ship with National. ASCE does not start in Washington, but rather at our local level. Since 1975, I have been active in both local and national activities. My record provides the assurance and confidence that I, in partnership with Sections and Branches, can implement these changes.

Check Out

This article was contributed by Richard Swanson, Past-President.

When the state's Growth Management Act was passed in 1990 and 1991 it did not address the question of how facilities "of state-wide significance" (such as highways) would be planned for and who had responsibilities for setting level of service standards.

House Bill 1487, passed by the 1998 Legislature, finally did create a planning blueprint - and gave the Commission and WSDOT the responsibility of a first step: Producing a list of highways of statewide significance in time for the 1999 Legislature.

WSDOT's Transportation Planning Manager, Charles Howard, briefed the commissioners on the requirements of the bill at their April meeting. The legislation, Howard noted, requires the Commission to give programming priority to improving roadways designated as "highways of state significance."

"Another important feature of the bill," said Howard, "is that it makes it clear that although the state needs to work in consultation with local governments, the state has final authority to set the level-of-service standards on statewide significant highways."

Thank You

Thank you **John Knowles & Associates** for donating last month's raffle prize. The \$22 raised was deposited in our student activities fund. This fund makes grants in support of engineering activities for students of all ages.

ASCE Calendar

June	Quaternary and Engineering Geology of the Central and Southern Puget Sound
3 Board Meeting, Olympia	Lowland August 6-8, 1998: 8:30 a.m. - 4:30 p.m.
9 Section Meeting, Olympia	Construction Site Erosion and Pollution Control
July and August the section is in recess. Newsletters and meetings will resume in September.	September 8 and 9, 1998
PELP Programs	Effective Writing for Technical Professionals
For information contact Ron Bucknam, PELP Program Director, at 206/543-1178; fax:206/685-3836; or E-mail: rbucknam@u.washington.edu .	September 15, 17, 22, 24 and 29, 1998 (five sessions)