

Civil Engineering and ASCE—A Dynamic Pair
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President

It's great to be a civil engineer! I know I'm predictable but let's get it out on the table. And it's great because of the projects we do. But the public needs to know about the projects we do and that is why our past president James Pyro, in 1994, established the Excellence in Journalism Award to honor superior news coverage that improves the public's understanding of civil engineering. This year's recipient of our excellence in journalism award is Rob Carson of the News Times Tribune in Tacoma, Washington and Rob is being presented the award for his outstanding coverage of Western Washington's new Tacoma's Narrow Bridge. Now a lot of people call it the second Tacoma's Narrow Bridge, we all know it's the third. The first one is down bottom. His comprehensive reporting and unbiased analysis contributed to a thorough and accurate understanding of the engineering and construction challenges that were overcome at the impact the bridge will have on the surrounding region. As an engineer, I thoroughly enjoyed reading this article and learned some things. I'm sure the general public was in awe as they read through these articles. Rob Carson is a special projects reporter of the News Tribune, a former senior editor of Pacific Northwest's magazine, Carson was a Pulitzer Prize finalist in 1991 for a series of stories he wrote on physician assistant suicides. He's the author of Mt. St. Helen's – the eruption and recovery of a volcano, and the Living Mountain, the work of juvenile fiction. He's currently documenting the construction of the Newts Comenary Bridge for a book that will be published in 2007 when the bridge is complete. ASCE is honored to present Mr. Carson with the 2005 Excellence in Journalism Award

Our works, our projects, make our communities, our states, our nation and the world a better place for everyone living here. Our projects make life safer, and give the members of society more time to devote to their families, their communities and their own personal interests. And, when I say safer, I'm not just referring to reducing auto accidents or dam failures; I am talking about our profession that has done more to improve public health than any other in the history of the world by providing clean water and sound wastewater collection and treatment systems. That is what civil engineers do and have done!

Yet, when we talk to junior high school and high school students, we try to attract them to civil engineering, We approach them by saying, "Come be a techno-nerd with us! Come do math, come do science!" Yes, math and science are our tools, but what we do is improve communities. That is why it's great to be a civil engineer, and that is what we need to be selling to students we try to attract to our profession.

- There are other reasons why it's great to be a civil engineer. For example, is there another profession that couples intellectual capacity and creativity the way civil engineering does? Engineers creative? Wow what an unusual thought—to the general public. But we all know that our projects are "one-of-a-kind" takings — tailored to the unique geologic, hydrologic and environmental characteristics of an area, plus coupled to the needs, wants, and values of the communities being served. Meeting all these constraints takes real creativity. I spoke earlier about math and science. They are our tools. And there are few people in the world with the ability to master them so civil engineers are really smart people! And the combination of creativity and intelligence makes our profession great!

Another outstanding attribute of civil engineering is the wide variety of career paths that it offers. As a civil engineer, you can be:

- A constructor
- A designer
- An educator
- A manager—project manager, corporate manager, asset manager
- A material supplier

This wide variety of ways to practice our profession also makes it great to be a civil engineer.

And there's one more aspect of our profession that adds to its greatness—and that's the people in our profession! Look at last year's OPAL award winners,

Mike Johnson—Public Works

Mike Walton—Education

Ralph Peterson—Management

Lou Silano—Design

Jack Lonley in Construction

Look at our Society Award Winners who will be honored at the Saturday morning Awards Breakfast. Look at Sudabeh Shoja, the Hoover Medalist who will be honored at the Visionary Luncheon on Friday. Look at our existing Honorary Members and the new ones who will be recognized at the gala on Friday evening. Look at corporate leaders like Jim Schaaf and Chuck Anderson of Schaaf and Wheeler who have made my primary duty to the firm my service to ASCE. Look at our ASCE Board of Direction members—look at Dr. Pat Galloway, our past president. Look at our Executive Director, Pat Natale, a tireless worker for our Society, and our profession. Look at all the ASCE staff, who devote their talents and energies to improving the practice and the image of civil engineers. We are truly fortunate to work, every day, with such creative, intelligent and active people. As the sign says, our members are leaders. This past year, ASCE members have been the presidents of the UEF, NSPE, ABET and NCEES. Next year, Pat Galloway will be an advisor to the president of WFEO. Past President Tom Jackson will again serve as the chair of the United Engineering Foundation and I will be chairing the U.S. umbrella engineering organization—the American Association of Engineering Societies. Our projects, intellects and curiosity, our variety of career paths and our people make civil engineering a great profession.

Now, since civil engineers are great people, what would you expect of ASCE? Well, our 139,000 members attest to the fact that this is a great professional society. It is dynamic. It is agile—quick to respond. It is constantly seeking to improve. It is addressing the

needs of our members. Let me spend a few minutes to tell you about some of our current activities as we assist in the aftermath of Hurricane Katrina before I cover our other accomplishments this year. Hurricane Katrina devastated the Gulf Coast areas in Alabama, Mississippi and Louisiana. New Orleans was extremely hard hit, as were Biloxi and Gulfport, Mississippi. ASCE's response has been swift and varied. Our Society has earmarked \$10,000 to match contributions made by our Board members, our Institute Board members, and our staff to the American Red Cross. This is our second Red Cross matching offered this year—the first was after the terrible tsunami of December 2004. In addition to our Red Cross contribution, ASCE has begun a fundraising effort to assist our sections, our branches, our student chapters, and our members in the affected areas. ASCE has donated \$10,000 to this effort, and has pledged \$15,000 in matching funds for donations made to the Hurricane Katrina Relief Fund by ASCE members. Our ASCE Foundation is overseeing this fundraising effort at no cost, so 100 percent of the money raised will go to the affected units and people. Some funds are being used to replace equipment lost to flooding and wind damage. Our IT staff, ASCE's Information Technology Staff, have been especially active in assisting the sections and branches in replacing damaged computers and peripherals. Funds over and above those needed for ASCE organizational units will be used by the affected sections and branches to assist ASCE members in need.

That's one level of response after Katrina. But in addition to our monetary contributions, ASCE has sent three performance assessment teams to the Gulf Coast:

- COPRI sent a team to Alabama and Mississippi to do coastal engineering assessments.
- COPRI also sent a team to the three affected states to assess damage to port facilities there.
- In addition, our combined team from COPRI and our GI institutes went to New Orleans to assess the state of the levees and sea walls in the area, while there they worked very closely with the Army Corps of Engineers.

Next month three more teams will lead down to the coast:

- Two from the Technical Council on Lifeline (Earthquake) Engineering will assess issues with lifeline communication, transportation, and energy systems.

- Our AEI will also send a team to evaluate the performance of curtain walls in buildings in the damaged area.
- In addition to our disaster response teams, ASCE will also have an extremely important role in the “official” investigations that are beginning. Secretary of Defense Donald Rumsfeld has convened an interagency performance evaluation team. The National Research Council will have oversight of the investigations. The Corps of Engineers will be the lead agency; and ASCE is the external review panel for these important activities. Our Society is being recognized more and more as the greatest source of civil engineering expertise available. We should be proud of that.

Let’s look at some ASCE’s other accomplishments in 2005.

In March of this year, as Blaine just told you, ASCE released our 2005 Report Card on America’s Infrastructure. The release occurred during our annual Legislative Fly-In, where 130 ASCE members from around the country came to Washington for two days where they were briefed on issues that are important civil engineering matters that are before Congress and then had meetings with their representatives and Senators. Through a stroke of good luck—not skill and political gamesmanship as others attributed to us—the House of Representatives was debating the Transportation Bill on the day the Report Card was released, and several members were seen on television waving their Report Card as they made their presentations if you didn’t understand that bit about gamesmanship, we actually were contacted and chastised for having such a cheap political trick that we released our Report Card when the House was doing their debate. It’s nobody’s fault that the check of this date wasn’t checked month ahead, but if people really do think that we are really that good that we can influence the Houses Legislative Calendar, I’m willing to take it, that’s fine with me. Our press conference for the Report Card Release was Web cast to about 1,000 sites, and radio, TV and newspaper coverage was comprehensive. I think Blaine alluded to the fact that our Web site had over a million hits shortly after the Report Card was produced. Our government relations staff led by Casey Dinges and Brian Pallasch, as well as Jane Howell and the Communications

staff were responsible for this great success. ASCE is fortunate to have such outstanding professionals on our staff.

During 2005, ASCE has also showed that we can undertake long term projects, not things that have to get done in weeks or months or even a president's year, but long term activities. And we continue to work diligently toward their successful completion under the leadership of Dr. Jeff Russell, of the University of Wisconsin who is named one of ENR's Top 25 Newsmakers for last year. ASCE has continued to promote the Body of Knowledge that the civil engineer of the future must have to enter our profession. We're working with over 20 universities throughout the country to develop model curricula and we're also developing methods to evaluate courses offered by companies, by distance learning centers and by others that could be used to meet the body of knowledge requirements in that four-year period during which engineers are getting the necessary experiences except for the license and exams after their bachelor's degree. Another long-term project we have underway and are moving strongly with is the Extraordinary Women's Project initiated by my predecessor Pat Galloway. It continues to move forward toward its goals the coffee table book will be published in February in time for E-Week and will describe the contributions of Women in the engineering profession. The forward of the book will be written by the honorary chair person for the program, Mrs. Laura Bush. But the book is just the first of many important outputs of this project, they will also be a PBS TV special on the women's work and perhaps most importantly, there will be material for junior high school and high school guidance counselors on what engineers really do based on the work of the women described. This is a great collaborative effort being done under the offices of AFES with over 80 engineering organizations participating. This Extraordinary Women's Project will also be a great importance to ASCE efforts in embracing diversity among the civil engineering profession and aiding our committee in women in the major outreach programs we plan to present to junior and senior high school students in the coming years.

Alan Boeckmann is a great warm up act because the next thing I would like to talk to you about is program within ASCE to develop global principles for professional conduct. We started this a little over a year ago based on a couple of different things. One was some

forecasts. That said in less than 10 years, 80 percent of money spent in infrastructure in the world will be spent in what we think as developing countries. By 2020, two-thirds of the major cities in the world will be in those developing countries, okay that's different but is it really an issue for ASCE. Well let's look a little further. Estimates the size of the engineering construction industry around the world estimate is about four trillion. Now Japan's economy is 4.2 trillion dollars a year The U.S. is 10.9 trillion a year, Germany is 2.8 trillion a year so the engineering construction industry is gigantic and we are looking at losses of about 10 percent for the best estimates that we can get. 390 to 400 billion dollars a year are being lost to bribery and fraud and corruption. Stop and put that into perspective for a minute. We just had a two-year exercise getting a transportation bill in the United States. That bill calls for 286 billion dollars over six years. We're talking about 400 billion dollars each and every year. The magnitude of the problem is gigantic. Others are working on the project you heard Alan Boeckmann talk about the World Economic Forum with 80 firms involved in a zero tolerance program. Ralph Peterson also covered this topic at the luncheon talk today. The constructors are trying to dry up the supply side of dry money. So are the consulting engineers of the American Society of Consulting Engineers and their international organization, FIDIC have both a zero tolerance program for both their firms and training programs on how to implement and document the success of these programs. So, another help to try and dry up the supply side of money, the World Bank, didn't talk about corruption, they could talk about leakage but not corruption. Well they got religion and they got the message and they did it right they formed an integrity management unit that is led not by a banker not by a financier, not by an engineer not by an attorney, who's led by a policeman. And they were serious. And there are 350 individuals and firms on a public blacklist now and there are a couple of hundreds lawsuits filed in jurisdiction around the world to recover some of the money lost by corruption. I heard for the first time last Friday about the bank's new voluntary disclosure program where firms who have participated in unethical practices in the past can come in and confidentially tell their stories and give names and not be subject to a blacklist they will be subject to a probationary period but it is confidential and they will have to hire someone to oversee the integrity of the processes within the firm but the World Bank thinks this is going to increase their ability to make corruption less

socially acceptable through out all the organizations that are involved in the engineering and construction industry. You've also heard people talk today about Transparency International which ranks the openness of decision making processes and we are fortunate to have today a delegate from Finland which is the highest ranking country by Transparency International. And we heard some talks this afternoon about what's making Finland's program so transparent and so well recognized. All that was going on by the engineering organization with individual members were silent. And when you stop and think we have some advantages. Our members work for the constructors and the consulting firms so we can give them a second dose of ethics. But we also have members who work for owners so while firms can try to dry up the supply side, we can now start to effect the demand side for bribery money. And perhaps most significantly of all, we have educators and we can get in their hands better information on ethical practice, better teaching tools for ethics, and the next generation of engineers will have a lower tolerance for corruption than the current graduates. That's what's going on around us. So to make some of these happen we started a task committee chaired by Bob Crist who is senior vice president of Black and Beach, and the membership is a kind of interesting committee membership, there are two ASCE past presidents on it, Art Fox and Pat Galloway, Jose Sanjuan Medem, the past president of the World Federation of Engineering Organization who is from Spain but is an ASCE member, who is a member who was just made an honorary professional fellow of ASCE today is on that committee. The current president of FIDA, the international consulting agency of engineering firms, is an ASCE member of Mexico, Jorge Diaz Padilla is on that committee and we have other eminent engineers and engineer attorneys on the committee. So far the folks have put together a workshop in Baltimore last year and here in Los Angeles today. They have reached out to the 67 organizations around the world which whom ASCE has agreements of cooperation and gathered input from them on their ethical codes of practice, their rules of practice, we also go information from ASCE's 24 international organization and input from about 20 other professional and allied design societies here in the U.S. So it's a coalition of 100 plus groups of people sharing information where ASCE is acting as a secretary. We have finalized, drafted policies and guidelines, we've reviewed and revised them and we've developed an engineer's charter that has been signed by 100 individuals and

organizations. Our board of direction, earlier this week, adopted a new policy that explicitly states a zero tolerance for bribery and we are planning and formulating the final wording on proposed changes of ASCE's code of ethics.

In the years present, I had the good fortune to do a bit traveling and went to China, three countries in Central and South America, Africa, and Western Europe and central Europe. Universally, the engineers when they heard of this plan and were asked to participate did so gratefully. Most took the tact that we live in a system that we don't like and we don't feel like we have enough power to change it. But if we can raise the brightness of the spotlight that we shine on corruption, that's a step that we can take and were taking jointly with the constructors, and the consulting engineering firm, the World Bank, and Transparency International. Shine a brighter spotlight on it that's first. Second, we are developing ways to make participation in corruption less socially acceptable for people. People don't want to go to jail, people don't want to be shunned, so we want to make sure that if you participate in these kinds of activities your likelihood of being caught and identified and ridiculed is much higher, and ridicule may be easy compared to jail in some places. I'll let you know that this is an ongoing activity at ASCE and will not end this year it will continue until 2006 and based on what we learned today at the day-long session, the committee will meet here tomorrow to map out the final strategies and tactics for 2006. We recognize that there may be a generational solution to this problem by the combine, increasing the spotlight and making things less socially acceptable and educating the new engineers. It may take some time so we're not going to quit we're going to keep it going, just as Alan Boeckmann suggested we do.

One last ASCE activity to let you know about, the U.S. rejoined UNESCO and in doing so, UNESCO started adding members to their engineering activities. Hank Hatch, who chairs our international committee was named a U.S. representative. Following that ASCE was asked to name a rep and we selected Russ Jones, who has remained active in our U.S. activities. Both have been named honorary members of ASCE, both have represented our profession very well. That's kind of a thumbnail sketch of what we've done this year. And there's been a lot done and a lot going on. I didn't talk about the many things that have been happening but I tried to pick some highlights. Our future is in the very capable hands of Dennis Martenson. Dennis, I know is going to start a new

strategic planning process for us and I ask you to come on Saturday Morning to the annual business meeting and learn first hand from Dennis what he plans for the society next year. From my perspective I will let you know that our work on global principles for professional conduct will be actively continued throughout 2006. In conclusion, I've got to recognize one very important thing everything I did would not have been possible without the support of my wife Joan. Joan has traveled with me throughout the U.S and world. She's left home more then she's wanted to but she has always been with me and an active participant in showing people around the world and throughout the country that ASCE is quite an organization. Joan may I ask you to come up.

The talks, the programs, the report cards all are demonstrations of the three nouns up here: Vision, motivation leadership. That is what are society does in our activities. I would like say that I appreciate the support and friendship that I have received from engineers and ASCE and all around the world and applaud their interest in improving our profession. Their attitudes solidify my beliefs that ASCE is an outstanding organization, and it's great to be a civil engineer.