THE LOUISIANA CIVIL ENGINEER

ACADIANA BRANCH • BATON ROUGE BRANCH
NEW ORLEANS BRANCH • SHREVEPORT BRANCH
Journal of The Louisiana Section

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Port of Greater Baton Rouge keeps it rolling over Tensar® BX Geogrids

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The Louisiana Section is located in ASCE Zone II, District 14. Zone II consists of Districts 6, 7, 9, 10 and 14. District 14 consists of the Louisiana, Mississippi, Alabama and Georgia Sections.

President's Message

Barbara E. Featherston, PE

Past President Charles L. Eustis, PE, recently contacted me concerning bills being considered in the State Legislature that if adopted would require engineering services for public projects to be subject to competitive bidding rather than qualification-based selection as provided for in the current state statutes. The Section's Legislative Chair, Thomas A. Stephens, PE, has been on top of this issue and he has been in communication with the Louisiana Engineering Society and the American Council of Engineering Companies of Louisiana (ASCE/L). The LES and the ACEC/L as well as other state engineering organizations are encouraging their membership to contact their legislators to oppose these bills. One of the bills basically strips engineers of their recognition as a profession and their professional title. The other 2 bills would require a short list of the 3 top ranked engineering firms ranked from the qualifications-based selection process to further engage in a competitive bidding process. The following is an excerpt from a letter that I sent as the President of the Section to all of the state legislators:

> As President of the Louisiana Section of the American Society of Civil Engineers (ASCE), I represent more than one thousand civil engineers from around the State of Louisiana. The Louisiana Section of the ASCE opposes the above-referenced Bills. The Bills endanger the way professional engineers are selected for public projects. I stress the word professional, as engineering is a profession that is dedicated to the health, safety and welfare of the public. This includes roads, buildings, water treatment, electrical systems, etc.; all the infrastructure that the public depends on day in and day out. House Bill 1342 specifically removes engineers as professionals, thereby subjecting engineers to competitive bidding, rather than qualification-based selection (QBS). Competitive bidding would result in selection of engineering services based on the lowest price. It is our opinion that lowest-price selection of professional services of any type is detrimental to the public interest.

As soon as I was contacted by Charlie and Tom, I sent an e-mail to the ASCE National and they responded back to me within 24 hours and had a draft alert out to our Section membership within a couple of days. I appreciate the help that they provided concerning this issue and I truly believe that whatever part of our annual dues that are allocated to this service, it is money that is very well spent. I know that all of you with an e-mail address received the alert and I hope that everyone was able to utilize the ASCE national website where one is only 6 clicks away from sending e-mail correspondence to his/her state legislators.

In other news, the ASCE national continues to push the Governance restructuring proposal that will be decided in the upcoming ASCE election. The Section leadership continues to follow all of the information that is available on this issue that has been made available to the membership and it has maintained ongoing discussions during the Board meetings. As a result, I still continue to have concerns about this proposal because I believe that it is not well thought out relative to the mechanics of the election of the governing Board, the Institute directors and the at-large Directors.

I was sent an e-mail distributed by the Transportation and Development Institute asking their members to vote for the passage of the Governance restructuring proposal in the upcoming ASCE election. According to the e-mail, the Institutes will be members of a technical region. While I feel that this is a great idea, as a region the institutes will have two directors as opposed to all of the other regions that will only have one. Again, things do not add up in my opinion and it is my belief that the related issues are not being discussed in breadth or depth. In my opinion, the Governance restructuring proposal as a whole does not benefit the grassroots membership of the ASCE, however, I believe at the same time that there are some parts of the proposal that are quite good. Enough said...

An issue that continues to plague us is the lack of enthusiasm for service in the Section's volunteer, elected leadership. We were unable to find a member from one of our Branches to serve on the Section Board. Several current Board members have not been present for a Board meeting for almost the entire administrative year. We are trying and must try harder to do a better job of filling these positions with folks who can make the commitment to actively serve.

The problem appears to be that between the clearly important and top priority commitments we make to home and work, professional service to some would appear to be a distant third or lower priority. As a working mom with kids involved in everything from dance to baseball and with a job that typically requires my undivided attention 40 to 60 hours a week, I know from my personal experience that things do fall through the cracks when family and livelihood issues crowd the agenda. One of the first things to get cut under these conditions is the volunteer work commitment.

On one level I find that it is sometimes difficult for me to justify the time spent, not only in service to the ASCE as an officer and a Board member, but really in any activity in the various professional organizations. It all gets back to remembering to appreciate what I get out of my service. While serving at the Branch level, it was easier for me to see the rewards in working the booth during the local Career Expo, volunteering for Block City at Jazzfest or visiting with the kids at schools to discuss the benefit of a good math and science education. However, service at the section level does not always provide such a tangible sense of reward.

It seems that a substantial portion of the effort at this level in involved in discussing the issues as they may indirectly relate to our membership. There are extensive budget discussions and the resulting administration of the Section's revenues often distributing them to the Branches and Student Chapters where — in my estimate — the action is. The Section sponsors different events that relate to engineering and that benefit its members in general. These are often not very glamorous, but their results can be quite fulfilling. It takes a substantial commitment of time to serve well on the Section level and in Louisiana we have a pretty decent-sized section with a lot of opportunity for service.

To minimize the strain of the personal commitment of each Section Board member, a regular Board meeting is scheduled in each of the 4 branches during an administrative year. This means that the Board members from the New Orleans Branch get to travel to the Shreveport Branch once and vice versa. To otherwise make it easier for all concerned 3 of the 6 Section Board meetings typically scheduled during an administrative year are held in Lafayette. Even with this accommodation — no matter how you look at it — it is still a day away from work 6 times a year and this excludes the time required for the other work expected in service to the Section committees and the Executive Board.

It is my hope that the Section will continue to enjoy the same vibrant leadership that it has experienced in the past and that this vibrant leadership will experience positive growth in the future. I believe that this growth is predicated in part on the effectiveness of our elected and appointed leadership to serve and lead. Their efforts and more importantly their example is a measure of the Section's ability to facilitate the interest and involvement of its members in general to participate in ASCE functions, and from that experience commit to — and serve effectively in — its appointed and elected leadership positions.

About the cover: *The winner of the 2004 Deep South Conference surveying competition is the McNeese State University ASCE Student Chapter surveying team. Pictured from the left are two of its members, Michael Hollier and Tyson Thevis. They are shown with a surveying competition judge (right) during the 2004 Deep South Conference competition held in Oxford, Mississippi on the Ole Miss campus.*

Port of Greater Baton Rouge keeps it rolling over Tensar® BX Geogrids

By Sean E. Wokasien, PE

Civil engineers in Louisiana know that when it comes to roadwork, the state — and especially South Louisiana — has a soft spot for tough challenges. Here, the need to stabilize and reinforce soft base soils and subgrades is a given, but the choice of available solutions can take anyone down a number of different roads.

Conventional approaches include chemical stabilization (lime, cement, fly-ash, etc.) and unreinforced cut-and-fill. Over the past two years, however, the Port of Greater Baton Rouge has opted for a more innovative solution — reinforcement with geogrid — in the successful completion of three major projects.

Challenging road for a busy port

Strategically located at the junction of the Mississippi River and the Gulf Intracoastal Waterway, the Port of Greater Baton Rouge ranks ninth in the nation in total tonnage handled. Served by major railroad lines, steamship carriers, barge lines, and national truck carriers, the facility provides critical access to the nation's heartland, the Gulf of Mexico, Latin America, and beyond.

This economic engine hums with grain facilities and a milling operation for the soybeans, wheat, oats, corn, and other crops grown in 31 parishes; molasses and specialty products storage and transport; petroleum storage and more. General cargo handled through the facility includes

- forest, paper, and steel products
- bulk commodities including coal and petroleum coke and
- heavy equipment including reactors, boilers, tanks, and cranes.

In addition, the Inland Rivers Marine Terminal, the Port's center of barge traffic operations for inland markets, launched operations in 1998. And under the Mississippi River Corridor Initiative, the Port has strategically linked with four other Mississippi River ports in the state to provide customers the services of the *world's largest port.*

Connecting much of the Port's infrastructure — and thus crucial to its success — is the 1.2-mile Ernest Wilson Drive. Originally built in 1954 (two years after the Port Commission was established), the road did not age gracefully. Despite repaving over the years — with asphalt up to 26" thick in some areas — Ernest Wilson Drive struggled to keep up with the relentless demands of 100,000 light vehicles, 100,000 heavy trucks (with some vehicle weights exceeding 100,000 pounds), and 8.3 million tons of cargo hauled each year.

Deterioration and spot failures were costing thousands in annual maintenance, and the Port's enviable record for productivity, cargo integrity, and safety was under challenge. Committed to significant transportation improvements, Port officials decided to excavate all of the road's existing asphalt and concrete, plus remnants of its sand and gravel base, and replace it with a ten-inch layer of unreinforced concrete supported by a 12" limestone base course. Plans also called for widening the road's lanes from 11' to 12', with 3' shoulders and an improved drainage system.

Stabilizing the subgrade was key to the project. A constant influx of shallow ground water, sure to saturate any road base material, ruled out chemical stabilization. Although lime treatment was an alternative, its cost, dependence on weather conditions, and potential for air contamination and site runoff made it less appealing. And given the Port's traffic volume, unreinforced pavement foundation was simply not an option.

Baton Rouge's Soil Testing Engineers, which provided geotechnical analysis and pavement design services, recommended Tensar® Biaxial (BX) Geogrids from Tensar Earth Technologies to improve the subgrade. "For ease of application, longevity, and ultimate serviceability, our geotechnical consultants and I felt that Tensar BX Geogrids were the most prudent application for the job," noted John G. "Jay" Hardman, PE, managing director of the Port.

Figure 1. Initial placement of limestone base course is being made on top of the BX1200 geogrid for the Ernest Wilson Drive reconstruction.

Figure 2. The ease of installation of BX1200 Geogrid helped the construction crew stay ahead of the fill operations.

Sean E. Wokasien, PE, earned his BSCE in 1992 and his MSCE in 1994 from West Virginia University and became a licensed engineer in the state of Colorado in 1998. Wokasien has worked at Tensar Earth Technologies, Inc. of Atlanta, Georgia since 1994. He began his career as design engineer and is currently the Southeast Regional Sales Manager for Tensar responsible for a region including the states of Alabama, Mississippi, Louisiana and Arkansas. Wokasien currently serves on two Louisiana Transportation Research Center committees for the research projects "Evaluation of Base-Soil Behavior under Repeated Loading" and "Use of Reinforced Soil Foundations to Support Shallow Foundations." This article is an extension of the presentation Wokasien made during the 2003 Louisiana Civil Engineering Conference and Show "Use of Geogrid for Enhanced Pavement Performance."

Two competitive products were rejected during the open-bid process because they did not meet the project specifications.

Tensar BX Geogrids: Innovative solutions for over 20 years

In use for more than 20 years — and now supporting the equivalent of more than 30,000 lane miles — Tensar BX Geogrids improve pavement systems by

- simplifying construction
- extending service life and
- reducing required fill materials.

BX Geogrids interlock with aggregate fill to create stronger composite structures and confine particle movement within the apertures of the geogrid. In subgrade improvement applications — unlike geotextiles — BX Geogrids distribute loads over wider areas to

- increase load bearing capacities
- reduce pumping and
- prevent shear failure.

In base course projects, they enable surfaces to resist lateral spreading and improve the structural performance and service life of a pavement.

Simple to install, as shown in Figures 1 through 3, BX Geogrids help reduce manpower and equipment needs as well. Further, BX Geogrids improve site access and enhance the drainage characteristics of flexible pavements — a big plus in South Louisiana. BX Geogrids can separate as well as reinforce in many applications, thus removing the need for a geotextile separator beneath the geogrid. Under certain conditions, geotextiles can actually clog. A simple calculation can be run to determine if a geotextile is necessary.

One road leads to another — and another

Work began on Ernest Wilson Drive in January 2002 as shown in Figures 5 and 6, and was completed in May 2003; Baton Rouge's Industrial Fabrics furnished geogrid product under the coordination of Burney Orgeron, geosynthetics specialist; Barber Brothers Contracting Company provided installation services. "We cut down to the subgrade and removed up to 2' of asphalt and other unsuitable material," Hardman continued.

Figure 3. BX1200 Geogrid is used for subgrade improvement on this access roadway to a new facility being built across railroad tracks.

Site preparation as shown in Figures 4 and 5 included a layer of geotextile separation fabric under the geogrid to prevent silty clay from migrating up to the base course. Altogether, nearly 32,000 square yards of Tensar BX1200 Geogrids were installed. In addition to road reinforcement, the geogrid layer provided a working platform for the contractor as well. According to Hardman,

> Once the geogrid was placed, and the base course material down and compacted, we had an all-weather surface (see Figure 5) with good drainage to work on. When a loaded truck would roll by, it wouldn't even leave a rut in the base course. There was no pumping. And because we did not have to wait for the subgrade or base course to dry after any storm events, our contractor could continue pouring concrete... From an installation standpoint, it really cannot get much easier than just rolling out the geogrid. The project went very smoothly and was finished ahead of schedule (see Figure 6).

The project proved so successful that Tensar BX1200 Geogrids were next installed at two facilities at the Inland Rivers Marine Terminal. The first, a ten-acre containerized cargo handling facility leased to a petrochemical company and shown in Figure 7, featured highly plastic clay even more challenging than conditions on Ernest Wilson Drive, according to Hardman.

"We cleared out vegetation, placed the geogrid, and added crushed limestone to create a working platform for the construction of the facility's infrastructure," Hardman noted. The site was eventually topped with 10" of unreinforced concrete.

Work on the project began in September 2002 and was completed in May 2003; Rayville, Louisiana-based Southern Industrial Contractors installed more than 64,000 square yards of geogrid to complete the project. "We had three to four workers on our grid crews and were able to pour up to 400 cubic yards of concrete every other day," commented Toni Estis, co-manager of the company. "The engineers specified a very

Figure 4. The correct placement of the fill on top of the BX1200 Geogrid is shown as it is placed along the center lap and spread to the edges to minimize any shifting of the geogrid.

Figure 5. During the base course placement and compaction phases, BX1200 Geogrids prevent rutting from developing.

Figure 6. The finished Ernest Wilson Drive roadway at the railroad crossing where BX1200 was used beneath the base course.

Figure 9. The cargo handling facility for the petrochemical company can be seen in the distance. Its rigid pavement is supported by BX1200 beneath its limestone base course.

good product," she added.

Estis's company, along with Baton Rouge-based Guy Hopkins Construction, next installed more than 14,000 square yards of Tensar BX1200 Geogrids on a 3.5-acre public container handling facility. The project featured an 8" crushed stone base topped with 16" of heavily reinforced concrete to accommodate the additional weight of stacked containers. Installation at this inland terminal site took place December 2003 - February 2004.

Port on solid ground for future operations

The three projects at the Port of Greater Baton Rouge join other high-profile installations in Louisiana featuring Tensar BX Geogrids, including the military transport taxiway extension at the Naval Air Station in Belle Chasse; haul road, pavement, and golf course work at the Pinnacle Casino in Lake Charles; and the Louisiana DOTD's two-layer geogrid reinforcement on Interstate 10 near the Egan/Crowley exit. The port projects reflect an important institutional change — from lime and chemical stabilization to the use of geosynthetics to create working platforms on stronger foundations. And they reveal the success a public or private entity can have when it aggressively maintains its specifications standards. For this important customer, it seems certain that Tensar BX Geogrids will continue to reinforce the port's reputation for service, performance, and success well into the future.

- Observations -

Design:

A little Cajun humor circulating on the Internet offers a simple but poignant insight into the important concept known as driver expectation and its application in the design and display of highway signs: One day Father Boudreaux and Pastor Thibodeaux wus fishin' on d'side of d'road. Dey saw d'need and thoughtfully made a sign sayin, "The end is near, Cher! Turn yourself around now, before it's too late!" Dey waved it at each passin car. Well, dis one driver didn't like d'sign and he shouted at dem hollin — "Leave me alone, you religious nuts!" And den he took off fast. All of a sudden dey hear dis big splash. Lookin at each other Father Boudreaux said, "...Ya think maybe we should'a made d'sign just sayin BRIDGE OUT?"

Leadership:

Gene Dixon, membership director for the American Society for Engineering Management, extolls the virtues of good *followership* in an article that appears in the March 2002 issue of the *Engineering Times.* His message is:

> When I think about followers(hip) in an organization, I try to convey the message that it is more than acceptance... Followers in an organization are committed towards a leadership goal and vision and it is something that has been collectively created, adopted and is pursued and is also culture based... followership doesn't exist without leadership.

For me, Dixon's last observation can be interpreted 2 ways and both are true.

- Followers cannot exist without leaders to follow.
- Effective followers not only follow well but also lead well.

Herein may lie a problem of semantics between us.

Dixon identifies 5 followership traits all in terms of courage.

- Courage to assume responsibility by seeing the need and seeing that it is met.
- Courage to serve by clarifying and fulfilling needs with humility.
- Courage to challenge the thinking of a leader, peer or organization while staying committed to — and focused on — the organization's mission and vision.
- Courage to participate in transformation (change).
- Courage not to follow a leader into an ethical lapse.

These traits in my view clearly describe traditional concepts of leadership — not followership. They describe the traits of a responsible leader participating in a joint venture by cooperating with other leaders who may be superiors, peers or subordinates in the organizational structure but nonetheless leading in the best interest of the organization and the public. This may be a semantic problem between us where Dixon defines subordinate members in an organization as followers and coins all their actions as followership — an attempt to unnecessarily redefine what is already defined as leadership. - *Editor*

Consequences:

Just as unintended consequences are normally thought of as the undesirable effects of an act intended to be beneficial, a little extra engineering in the functional benefits that are sure to be of value can also have intended consequences that are desirable to the extent that they may for example offer a passive counter-terrorism measure based on previous experience or based on the expectations of a potential terrorist threat. Yet justification is based entirely on certain and maybe mundane services provided in the engineered product or facility.

This would call for creativity, foresight, insight, leadership, effective teamwork, etc. — all those attributes and more that engineers claim to have and to need. In the simplest terms, it would be like finding a short cut home that also happens to provide safer passage than the longer route. Both benefits are then provided every time it is used. As with most engineering, when it works well no one notices — nothing happens but what is expected. However, when it doesn't work or dire, unintended consequences are realized for whatever the reason, then everyone notices.

- Editor

News from the Branches

BATON ROUGE

By David M. Burkholder, PE, President

Our normal monthly Branch membership meeting and luncheon was cancelled for February and our membership was encouraged to participate with the Baton Rouge Chapter of the Louisiana Engineering Society and attend the Engineers Week Banquet. The 53rd Annual Engineers Week Banquet was held February 26 in the facilities of the Baton Rouge Country Club. This joint meeting of the Branch and the Baton Rouge Chapter of the LES featured the award of numerous scholarships and the introduction of the Glasgow Middle School MATHCOUNTS team.

Every year the Branch awards one or more $500 scholarships that are presented during the Engineers Week Banquet. The only two requirements to qualify for the Branch scholarship are to be

- a Junior or Senior in Civil or Environmental Engineering at LSU or Southern University and
- in good academic standing with the College of Engineering.

Application forms were forwarded to the student chapter faculty advisors for LSU and Southern University for distribution with the request that qualified students be made aware of the scholarship.

During this year's Engineers Week Banquet, the scholarships were presented to Nicholas Fraiche and Lindsay Olinde. These two scholarship recipients were selected from among the applicants by the Branch Board.

Nicholas is a junior at LSU majoring in civil engineering and he has participated as a member of the student chapter in the steel bridge and concrete canoe teams and in the competitions during the Deep South Conference of student chapters. His other activities include intramural sports and operating a handyman service.

Lindsay is a senior at LSU majoring in civil engineering with a minor in environmental engineering. As a member of the student chapter, she has participated in the concrete canoe competition both as a builder and as a rower. Some of her other activities include working with Habitat for Humanity and rock climbing.

The caliber of the candidates for this scholarship always makes the choice of the recipients from among the candidates a difficult task. This year was no exception. These awards recognize leadership in student activities, other areas of interest and accomplishments in the classroom. Both Nicholas and Lindsay have demonstrated the potential to become leaders in the engineering profession and the ASCE.

The March Branch membership meeting and luncheon was held March 11 rather than the normal third Thursday due to the potential conflict with the Section Annual Spring Meeting and Conference being held in Shreveport at that time. During the luncheon, a presentation was given by William M. (Bill) King, Jr., PE, with the Louisiana Transportation Research Center and the manager of its Pavement Research Facility (PRF).

King noted that the PRF provides an important link between laboratory characterization and long-term pavement performance through the use of the PRF's accelerated loading facility (ALF). His presentation included an overview of the past, present and future of the LTRC accelerated pavement testing program and the benefits of accelerated pavement testing using the ALF. King proceeded to detail some of the recent enhancements that were made to maximize the operational performance of the ALF. Gavin P. Gautreau, PE, Chair of the Branch Geotechnical Committee, is making arrangements for a future continuing education seminar on this subject that will feature a tour of the PRF located in West Baton Rouge Parish south of Port Allen.

ACADIANA

By John E. Bosch, Jr., PE, President

The March membership meeting featured the newly elected Lafayette City-Parish President, Joey Durel, as its guest speaker. Before a packed house at A La Carte restaurant, Durel discussed his plans to improve the quality of life in Lafayette and to bring jobs to the Acadiana region. Also during the March membership meeting, elections were held to fill the Branch offices of Secretary and Treasurer for the next administrative year. Congratulations to Clint S. McDowell, PE, and Joseph P. Kolwe, Jr. who were elected Treasurer and Secretary respectively.

The Board would like to express its sincere gratitude to Jeffrey L. Duplantis, PE, for his hard work during his service on the Branch Board for the last two years. Jeff tendered his resignation following plans to move out of the Branch to accept a position in Baton Rouge. During the past two years, Jeff served as Secretary, Treasurer, and the Chair of the Membership Committee, and the Public Relations Committee. Jeff was instrumental in the success of the Branch's school library book donation program and the television commercials developed to present civil engineering as a career choice.

The Branch participated in Engineering Day held March 12th and sponsored by the College of Engineering of the University of Louisiana — Lafayette. During this event, Board members Dax A. Douet, PE, and Jeffrey L. Duplantis, PE, gave area high school seniors a brief presentation concerning civil engineering as a possible career choice and they answered any questions that were raised by the students.

Due to the Spring technical seminar, "Hydrologic and Hydraulic Design of Culverts," sponsored by the Branch and scheduled April 7-8, 2004, the Branch does not plan to schedule an April membership meeting. The May membership meeting will be the Branch's annual crawfish boil scheduled to be held in Girard Park on May 14th at 6:00 pm. As always, it will be a joint meeting with the Lafayette Section of the Institute of Electrical and Electronics Engineers and the Lafayette Chapter of the Louisiana Engineering Society.

On behalf of the Board, I want to wish everyone a great summer!

❖ Quote ❖

Globalization: *Although we knew that manufacturing jobs could be lost abroad, we imagined that service jobs — most U.S. jobs — were safe from international competition. The fact that they aren't could profoundly alter American attitudes toward globalization, even though the danger is exaggerated and misunderstood... Companies facing relentless competition will seize almost any approach to cut costs including outsourcing ...(that) is spreading to many services as a result of... (a) the ability to digitize information..., (b) cheap (and easy) international communications, (c) rising educational levels abroad... (and) wages abroad are so low... Like most new trends, this one inspires hype... (An estimated 300,000 to 500,000) service jobs have been outsourced abroad... research projects a loss of 3.3 million jobs by 2015... a tiny fraction of today's 138 million U.S. jobs... The... main sources of job destruction and insecurity remain domestic. Manufacturing employment peaked... at 19.5 million; now it's 14.5 million... while in that period, total U.S. employment grew about 40 million... As long as the economy responds by expanding production then most job losses are temporary... If our products remain competitive, we'll get an adequate share of global trade. In theory, service imports... (outsourcing abroad) shouldn't be any different. Overall job gains ought to dwarf job losses. What's unknown is whether this theory — which has worked for 60 years — will continue to work. In a weak job market, outsourcing — a small threat by itself — could become a lightning rod for anti-globalization discontent.*

- Robert J. Samuelson
  Columnist

SHREVEPORT

By C. Eric Hudson, PE, President

The fifth Branch membership meeting of the year was a joint meeting with the Shreveport Chapter of the Louisiana Engineering Society and the Shreveport Section of the Institute of Electrical and Electronics Engineers. It was housed in the Petroleum Club facilities February 11, 2004. On behalf of the Branch, I would like to extend thanks to the Shreveport Chapter of the LES for all the hard work its members have put forth in support of our joint meetings. The featured speaker for this meeting was Bossier City Mayor George Dement. He provided a brief overview of the direction he sees the City is heading and brief discussion of its ongoing and upcoming projects.

As you all may know by now, I am a bit more relaxed now that the Section 2004 Annual Spring Meeting and Conference that was hosted by the Branch is now behind us. The Conference was held March 18-19 and housed in the Clarion Hotel here in Shreveport. All of the Branch officers did an excellent job helping me plan, prepare and host the Conference. I would like to especially thank all of our sponsors for supporting the Branch and the Section when we need you the most because without you the Conference would not have been possible.

The Conference was a great success. We had about 70 registered participants, 12 exhibitors and 16 excellent speakers. For those who attended, I hope you enjoyed it. The awards banquet was also well attended with approximately 50 members and guests. I would like to thank **O. Lee Underwood, Jr.,** PE, for his excellent performance as the master of ceremonies for the presentation of the Life Member certificates. More details concerning the Conference events appear elsewhere in this issue.

At last, the Branch-sponsored annual golf tournament is just around the corner. It is planned to be held at Olde Oaks Wednesday, June 2, 2004 beginning at 11:00 am. Please mark your calendars. It will be the same format as it has been in the past.

The April Branch membership meeting will be in the facilities of the Petroleum Club and our planned featured speaker will be Greg Korbelic with Rinker Materials. Greg is substituting for Steve Nilforoushan who was originally scheduled to make this presentation during the Conference but he was unable to do so because he had a last minute schedule conflict. So, for those of you who were interested in attending this presentation, you will have another chance with Greg making the presentation.

Do you have any comments concerning the Branch and/or its activities? Do you wish to share some news with your fellow members in the Branch or in the Section? Are you interested in publishing an article in the newsletter? To get consideration for these and other interests, please feel free to contact your Branch officers serving on the Board.

NEW ORLEANS

By Christopher G. Humphreys, PE, President

The Branch has continued to conduct informative technical seminars and host interesting guest speakers during its monthly general membership meetings throughout the first quarter of the 2003-2004 administrative year. During the January general membership meeting John P. Basilica, Jr., Undersecretary, Louisiana DOTD, provided an update on Louisiana's transportation infrastructure. During Engineers Week in February, our general membership meeting was held jointly with the New Orleans Chapter of the Louisiana Engineering Society where David C. Landry, PE, Vice President of Freeport-McMoRan, was the guest speaker. Thomas R. Griggs, PE, an Engineer Manager with the Louisiana Department of Environmental Quality, was the featured speaker during the March general membership meeting. He presented the status of the Clean Water State Revolving Fund Program.

The Branch has planned a general membership meeting for April 27th that will be a luncheon meeting in the UNO Alumni Center. The planned topic is, *Where do baby engineers come from? — The civil engineers of tomorrow.* During this meeting, Vernard Henely, Director of the Louisiana Engineering Advancement Program (LEAP), will update our members attending on the success of LEAP to attract middle and high school students to our profession. As part of this presentation, the chairmen of the civil engineering departments from Tulane and the University of New Orleans, and the deans of the colleges of engineering of the respective universities, John H. (Jack) Grubbs and Kenneth L. McManis, PE, and Messieurs Alfred and Trahan will provide information regarding engineering enrollment, and more particularly civil engineering enrollment, at the undergraduate and graduate levels. This presentation will include the trends in demographics, attrition, estimated quality of students, etc.

Part of the agenda for the planned Branch general membership meeting for May 26th is the election of Branch officers for the 2004-2005 administrative year. The Branch annual awards ceremony recognizing outstanding civil engineers in the Branch area is scheduled for June general membership meeting.

Geotechnical Committee

In addition to providing informative guest speakers for the general membership meetings, the Branch's technical committees conducted several independent educational seminars. In March, the Geotechnical Committee began its planned series of lectures on subsidence with a very interesting seminar titled *Subsidence and faulting in southeast Louisiana.* This seminar held in the UNO engineering auditorium featured two divergent viewpoints on land loss in coastal Louisiana. Woody Gagliano presented a brief summary of the years of research on subsidence due to faults. Dale Britsch of the Corps of Engineers represented the Corps' views on the subject. A subsequent seminar on this same topic focusing on the engineering mechanics applied to subsidence is currently being planned for May 2004.

Structures Committee

The Structures Committee has conducted several seminars beginning with an overview of the *International Building Code* and *New Orleans Building Code* presented in January by Subash Kulkarni, PE. This was followed with the annual David Hunter lecture titled *Legal responsibilities of structural engineers: Design and construction.* This seminar was held in March and it was presented by Thomas L. Jackson, PE, and Larry Canada.

A seminar titled *Finite Element Analysis and Modeling* featuring Professor Kenneth M. (Mac) Will of the Georgia Institute of Technology is planned for April 29th. A seminar on wind loading is planned for May 20th featuring Marc L. Levitan from Louisiana State University.

Science and Engineering Fair

The New Orleans Branch Outreach Committee has been active beginning with the Greater New Orleans Science and Engineering Fair held March 1-3, 2004. The Branch sponsors two Special Awards presented during the Fair. One award is sponsored by the Branch as a whole for the entries exhibiting the best use of civil engineering principles. The other award is sponsored by the Branch's Structures Committee for the entries exhibiting the best use of structural engineering principles. On behalf of the Branch I wish to express appreciation to Norma Jean Mattei, PE, Chair of the Branch Outreach Committee, who organized the entire effort on behalf of the Branch and the Structures Committee. She also served as a judge for the Branch awards during the Fair. Also on behalf of the Branch, I wish to acknowledge its appreciation for the volunteer efforts of Anthony F. Goodgion, PE, Mark H. Gonski, PE, and Thomas M. Smith, PE, for judging entries for the Structures Committee awards and for the volunteer efforts of Angela DeSoto-Duncan, PE, and Deborah Keller, PE, who served as judges during the Fair. Branch award winners and Structures Committee award winners and their project/exhibit titles are listed below:

Branch Awards:

- The winner of 1st place Junior Division (a $75 award) was **Sarah Grodsky** a 7th-grade student from St. Clement of Rome. The title

(Continued on Page 12)

Highlights of Spring Meeting and Conference

By Ashley T. Sears, EI

The 2004 Spring Meeting and Conference of the Section hosted by the Shreveport Branch was considered very successful with over 70 registrants, 16 sponsors, and 12 exhibitors. The first day of the Conference began bright and early at 7:30 am with registration and a continental breakfast being served. The 8 very informative technical seminars scheduled before the luncheon began at 9:00 am. The subjects ranged from *Centrifugal Pump Sizing* to *Prestressed and Precast Bridge Design in Louisiana.* Several of the technical sessions were presented by professors from Louisiana Tech. Before each session, door prizes that were donated by the various exhibitors and sponsors were awarded to Conference registrants.

The keynote speaker for the luncheon was S. Bruce Easterly, PE, the District 04 Engineer Administrator for the Louisiana DOTD. He did a fantastic job presenting the current state of affairs and the workings of his Department. Following the luncheon, the afternoon schedule provided 6 technical seminars that included one on *Ethics* presented by Section President-Elect, Norma Jean Mattei, PE. The Conference registrants finished the day with a greater knowledge of the current events and trends in civil engineering in Louisiana and around the nation.

The Conference awards banquet was held at the conclusion of the first day with, Section President Barbara E. Featherston, PE, providing the opening remarks. She noted that we were present to celebrate the accomplishments of those Section members who had recently attained the status of Life Member and who have served their profession for a full career. And we were also present to celebrate the accomplishments of exceptional engineering students who were readying themselves to begin service in the profession.

Five of the 17 Section members who had attained Life Member status were in attendance and they were individually recognized and presented with their Life Member certificates. O. Lee Underwood, PE, from the Shreveport Branch acted as the master of ceremonies and presented the certificates. As part of his presentation, Lee began with a brief explanation of the requirements to reach the membership grade of Life Member in the ASCE. It includes factors such as age, years of membership, and years of paying membership dues.

We were pleased to learn from Lee that the career accomplishments of the recipients who were present to receive their Life Member certificates far exceeded what one may consider to be the *basic* requirements. Each recipient had made significant contributions to the engineering profession and community and continues to perform above and beyond professional duty. Congratulations to all the new Life Members. We are so very proud of your many accomplishments.

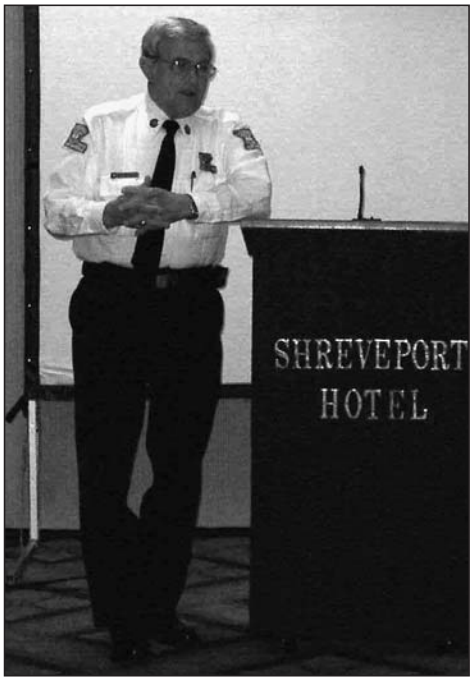
Marilyn Carriere and Blaise receive his Life Member certificate from President Featherston.

Eugene R. (Ray) Desormeaux receives his Life Member certificate.

Laverne Klier and Jerry receive his Life Member certificate.

Maria Prochaska and Billy receive his Life Member certificate.

Teddy Allen, the keynote speaker for the awards banquet, during his presentation.



W. K. Matlock of the State Fire Marshal's Office presents the technical session on the Life Safety Code during the Conference.

Luncheon keynote speaker Bruce Easterly (left) visits with Shreveport Branch President Eric Hudson during the Conference.

The Section members who achieved the status of Life Member listed by branch are

Acadiana Branch:
- W. Dean Atkins
- Eugene R. Desormeaux, PE
- B.J. Landry, PE
- Ralph D. McGee, PE

Baton Rouge Branch:
- Blaise M. Carriere, PE
- Charles H. Coates, Jr., PE
- Jerome M. Klier, PE
- Kenneth A. Perret, PE
- Billy R. Prochaska, PE
- Khalid M. Thalji, PE

New Orleans Branch:
- Robert Buisson
- Rixby J. Hardy
- Thomas L. Jackson, PE
- Larry W. Lobdell
- Robin P. Stagg

Shreveport Branch:
- Edmund J. Giering, III, PE
- F. Markley Huey, PE

Those who were present to receive their Life Member certificates during the awards banquet were messieurs Carriere, Prochaska, Desormeaux, Klier and McGee.

The distinguished civil engineering senior student awards were also presented during the banquet by Jerome M. Klier, PE, from the Baton Rouge Branch. One senior student from each of the civil engineering departments with an ASCE student chapter in the Section was presented with a commemorative plaque acknowledging his/her accomplishment. The students were nominated and chosen by the respective faculties. Only 3 of the 7 student award recipients were able to attend the banquet to receive their awards. Congratulations, students... Keep up the good work.

Those who were chosen to receive the distinguished civil engineering senior student award are
- Brooke Fletcher, Louisiana Tech
- David Godbold, LSU
- Nicole M. Harris, Southern
- Stephanie Krebs, UNO

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Conference registrants congregate around exhibitor displays during the breaks between technical sessions to discuss the products and services available.

From left, Louisiana Tech Student Chapter Advisor, Norman D. Pumphrey, Jr., PE, President Featherston and Brooke Fletcher display her distinguished civil engineering senior student awards for Louisiana Tech University and for the Louisiana Section.

(Continued from Page 11)

- Lean Perrin, UL at Lafayette
- Nicholas Pestello, McNeese
- Jennifer Snape, Tulane

Those present during the awards banquet to receive their awards were Fletcher, Pestello and Snape. Brooke Fletcher of Louisiana Tech was also recognized as the recipient of the Section's distinguished civil engineering senior student award.

Once all the ceremonies were completed, Teddy Allen gave the keynote address that proved to be very entertaining. If you have not heard him speak, you are missing a treat. We all enjoyed his perspective of the Engineering World. Teddy grew up in a town with a population of 800 and very few paved roads. He advised us that he would not tell any of our engineering secrets. This included the fact that a suspension bridge is just an optical illusion. We all enjoyed the perspective he provided of our profession and the physical evidence of our hard work that can be seen in the community. Thanks Teddy for a very entertaining evening.

The second day of the conference began at 8:00 am with 4 very informative technical seminars that included the subjects of Asphalt Pavement Design, Slabs-on-grade Design, and Trenchless Technology. More door prizes were awarded during the technical sessions and those in attendance had the opportunity to learn more about the current events and trends in civil engineering in Louisiana and around the nation. Once the technical sessions concluded, they were followed by the Section a general membership meeting at 10:30 am — Section President, Barbara Featherston presiding. Reports were received from the various Section standing committees. A discussion ensued concerning prefiled bills in the Louisiana Legislature that could profoundly affect the practice of engineering in Louisiana. The scheduled election was held to elect the officers and directors who will serve on the Section Board during the next administrative year. The membership meeting was very informative and it provided a poignant conclusion to Conference.

Nicholas Pestello receives his distinguished civil engineering senior student award for McNeese State University from President Featherston.

Jennifer Snape receives her distinguished civil engineering senior student award for Tulane University from President Featherston.

(Continued from Page 9)

of her exhibit was *Now You See Them, Now You Don't: Louisiana's Vanishing Wetlands.*

- The winner of 2nd Place Junior Division (a $50 award) was **Eric Lorio** from St. Angela Merici. The title of his exhibit was *The Power of Pulleys.*
- The winner of the 1st Place Senior Division (a $75 award) was **Maren Leopold,** an 11th-grade student from Ursuline Academy. The title of her exhibit was *To Weld or Not to Weld: Corrosion is the Question.*
- The winner of the 2nd Place Senior Division (a $50 award) was **Joseph Simon,** an 11th-grade student from Benjamin Franklin High School. The title of his exhibit was *The Effect of Heavy Lift Model Types in Load Holding Capacity.*

Structural Committee Awards:

- The winner of the 1st Place Junior Division (a $75 award) was **Benjamin Tullier,** a 7th-grade student from Christian Brothers. The title of his exhibit was *Concrete Mixes.*
- The winner of the 2nd Place Junior Division (a $50 award) was **Emile Stieffel,** an 8th-grade student from Arden Cahill Academy. The title of his exhibit concerning land surveying was *Could the Greeks Have Done It?*.
- The winner of the 1st Place Senior Division (a $75 award) was **Joshua Hutchinson,** an 11th-grade student from Benjamin Franklin High School. The title of his exhibit was *The Effects of Three Types of Steel on Bridge Stability.*
- The winner of the 2nd Place Senior Division (a $50 award) was **Dannielle Brandt,** an 11th-grade student from Ursuline Academy. The title of her exhibit concerning the vibrations induced by trucks was *What's Shaking?*

Outreach Committee

The Outreach Committee of the New Orleans Branch in association with the Structures Committee is currently developing an ASCE television commercial to be aired on television in the Branch area. The primary objective of the advertisement is to promote the profession of civil engineering to the general public. In addition to public awareness, a secondary goal is to promote the profession to children as a viable career choice via parental awareness and support. The commercial is planned to be a 30-second spot highlighting local metro area civil engineering projects. It is hoped that the advertisement will educate the public concerning the general aspects of civil engineering.

The Outreach Committee will continue as it has in the past to promote civil engineering during the upcoming New Orleans Jazz and Heritage Festival where it will again conduct the children's exhibit, *Box City.* Volunteer Branch members with their families and friends will support an interactive exhibit that will be in continuous operation for the full 7 days of the Festival. It is an opportunity for the participating children to color and decorate boxes as the various structures needed in a miniature representation of the City of New Orleans. To do this, they must first go through the process of obtaining a permit to locate their proposed structure in the 8' x 16' miniature representation of the City of New Orleans. Then they must follow the provisions of the permit they obtain. It is an excellent means to demonstrate this particular function performed as part of civil engineering practice — one that can be understood by the participating children and their parents, and it is an activity that is enjoyed by all.

2004 Deep South Conference

The University of Mississippi ASCE Student Chapter hosted the 2004 Deep South Regional Conference March 25-27, 2004 on its campus in Oxford, Mississippi. The Deep South Conference is an event sponsored by the supporting sections of the ASCE and local engineering firms. It is an annual event that circulates between host student chapters that brings together member student chapters from the civil and environmental engineering departments of the following universities from the states of Louisiana, Mississippi and Arkansas:

- Arkansas State University
- University of Louisiana at Lafayette
- Louisiana State University
- Louisiana Tech University
- McNeese State University
- University of Mississippi
- Mississippi State University
- University of New Orleans
- Southern University and
- Tulane University

This year's conference hosted guest student chapters from Tennessee

- Christian Brothers and
- University of Tennessee-Martin

The conference sponsors competitions that give student chapter members the chance to gain valuable hands-on engineering experience by competing in team competitions — a concrete canoe competition and a steel bridge competition, and the Daniel W. Mead Prize Paper competition that are all nationally sanctioned. The winner of the concrete canoe competition advances to the ASCE National Concrete Canoe Competition sponsored by the ASCE and Master Builders, Inc. to be held in coordination with the National Building Museum's exhibition opening of *Liquid Stone: Architecture in Concrete* in Washington, DC, on June 17-20, 2004. The winner and first runner-up of the steel bridge competition advance to compete in the 13th Annual National Student Steel Bridge Competition sponsored by the ASCE and the American Institute of Steel Construction, and it will be held at the Colorado School of Mines on May 28-29, 2004. Other competition events held during the Conference included an environmental engineering competition, a land surveying competition, and a concrete bowling ball competition.

The results of the competitions held during the Deep South Conference follow:

Student Chapter	Overall Finish	Concrete Canoe	Steel Bridge	Mead Paper	Environ-mental	Land Surveying	Bowling Ball
MSU	1	6	–	1	–	5	7
La. Tech	2	–	–	–	–	2	3
U. Memphis	3	–	–	–	2	8	4
ASU	4	4	2	–	–	11	–
LSU	5	2	1	–	–	10	–
Christian	6	–	–	2	1	4	5
UL @ Laf.	7	5	–	–	5	7	2
Ole Miss	8	–	–	–	4	9	6
McNeese	9	1	–	–	–	1	–
UT - Martin	10	7	3	–	–	3	–
UNO	11	–	4		3	6	–
Tulane	12	3	–	–	–	–	1

The McNeese State University competition concrete canoe being manned by Nick Pestello and Mike Hollier during the 2004 Deep South Conference concrete canoe competition races.

The Tulane Student Chapter competition steel bridge during the 2004 Deep South Conference steel bridge competition.

UNO

The Chapter attended the 2004 ASCE Deep South Conference hosted by the University of Mississippi. The goal of the Chapter this year was to rise to the challenge of full participation in all of the competitive events scheduled for the Conference. The students successfully competed in the steel bridge, surveying, and environmental competitions. While expectations were high for a very competitive concrete canoe this year, the Chapter's concrete canoe team suffered a crushing blow when their competition canoe experienced irreparable damage coming off the mold.

The Chapter set challenging goals this year and worked hard toward reaching them. The year has so far been a clear success in that the members gained important new perspectives of civil engineering through the professional development activities planned and the project competitions - both successes and failures.

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McNEESE STATE UNIVERSITY

Geaux Cowboys!

By Seth J. Woods

The Ole Miss ASCE Student Chapter hosted the annual meeting of the Deep South Conference of ASCE student chapters in Oxford, Mississippi March 25-27, 2004. The McNeese State University ASCE Student Chapter made a large impact on this annual meeting of the Conference that includes student chapters from Arkansas, Mississippi and Louisiana by placing first in two of the competitions held during the meeting.

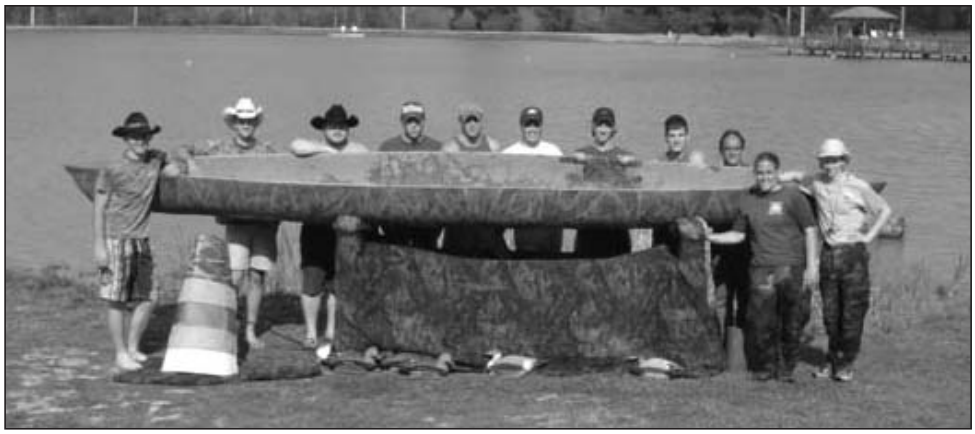
The Chapter participated in the surveying competition and with speed and accuracy, it surpassed the competition. The scoring for the competition is based on 3 components —

- 60% for accuracy
- 20% for time, and
- 20% for field book.

The Chapter's surveying competition team consisting of **Clayton Cormier, Michael Hollier,** and **Tyson Thevis** placed first in the competition. This was accomplished by achieving an accuracy of 0.01 feet — the best in the competition — in a time of 13 minutes and 7 seconds — half that of the nearest competitor. Sealing the win, the field book notes were completed without error.

The main event for the Conference was the concrete canoe competition. The Chapter's concrete canoe team was: **Nicholas Pestello** (captain) of Reeves, **Gregory LaFleur** of Lake Charles, **Seth Woods** of Gueydan, **Clayton Cormier** of Bell City, **Leigh Rush** of Lake Charles, **Tyson Thevis** of Gueydan, **Michael Hollier** of Moss Bluff, **Steven Hollier** of Sulphur, **Chris Cabaniss** of Groves, Texas, and **Magen Daughdril** of Sulphur. The scoring for this competition is based on 4 components —

- 25% for the design paper
- 25% for the presentation
- 25% for the final product, and
- 25% for racing.



The McNeese State ASCE Student Chapter 1st place concrete canoe team poses with the display of its competition canoe during the Deep South Conference meeting of student chapters. From the left they are Nicholas Pestello, Seth Woods, Gregory LaFleur, Tyson Thevis, Michael Hollier, Steven Hollier, Chris Cabaniss, Clayton Cormier, J.O. Uppot, PE, Faculty Advisor, Magen Daughdril, and Leigh Rush.

The Chapter was not new to the concrete canoe competition having placing 2nd overall in it the previous conference. This gave the Cowboys something to strive for. To better themselves, the team spent more time in the design and construction effort for this year's competition canoe.

The final design paper was sent to the judges 2 weeks prior to Conference for grading and the presentation was made the day prior to the races. The Cowboys had a rough start as the races began but improved as they continued. Following the races the competition canoe was set up for display and judging. The prior experience and extra effort paid off for the Chapter's concrete canoe team by placing 1st overall in the competition.

The awards banquet for the Deep South Conference ended the weekend on a good note for the Chapter. Its surveying team was awarded 1st place for their outstanding performance. Its concrete canoe team was awarded 1st place for best design paper titled *us Cowboys don't rite like we tauck.* The equally hard work put in the presentation paid off as well when the team received the award for best presentation. The judges enjoyed the hunting theme and sleek design of the Chapter's *Poke Boat* giving the team a 2nd place for the final product.

The Chapter's 1st place overall finish in the concrete canoe competition made the trip to Oxford a complete success. This 1st place finish in the Deep South Conference qualifies the Chapter to participate in the national concrete canoe competition that will be held in Washington, D.C. June 17-20, 2004 where the top 25 schools will compete for the national title.

From the left are Michael Hollier, Tyson Thevis and Clayton Cormier, the McNeese State ASCE Student Chapter 1st place surveying competition team.

McNeese State ASCE Student Chapter members display their award plaques from the Deep South Conference competitions. They are from the left J.O. Uppot, PE, Faculty Advisor, Leigh Rush, Chris Cabaniss, Magen Daughdril, Steven Hollier, Nicholas Pestello, Clayton Cormier, Seth Woods, Gregory LaFleur, Tyson Thevis and Michael Hollier.

Sections News and Information

Highlights of the January Board of Directors meeting

The January meeting of the Board was held in Ruston on the Louisiana Tech University campus in conjunction with the Student Chapter's annual awards banquet. Student Chapter President Brooke Fletcher presented a summary of the Chapter's recent activities.

- The Chapter's Daniel W. Mead Prize paper entry placed 3rd in the competition.
- The Chapter organized and held a senior "roast and toast."
- Recruiting new Chapter members from the freshman class has been very active.
- The Chapter currently has 40 members.
- Four Chapter leaders plan to attend the Zone II leadership conference.
- The Chapter will be participating in the Deep South Conference March 25-27, 2004.

The Deep South Conference will be hosted by the University of Mississippi Student Chapter in Oxford, Mississippi. The Tech Student Chapter is planning to participate in steel bridge competition.

President-Elect of the ASCE, William P. Henry, PE, attended a portion of the Board meeting to conduct a lengthy discussion about national ASCE affairs. He attempted to focus of three topics; inadequate education for civil engineers, professional practice and governmental affairs. The discussion also turned to the concerns of the Board members present that included the ASCE governance proposal, ASCE Policy Statement 465 - Academic Prerequisites for Licensure and Professional Practice, State Public Affairs Grants (SPAG), benefits to be expected from increased ASCE dues, section allotments, and members not paying section dues.

Henry noted that mandatory section dues were subject to a national membership referendum and failed to receive the two-thirds majority vote to pass. The significant issue of concern was that the ASCE may suffer a loss in membership if section dues were made mandatory. He explained that the recent revisions of the SPAG application process reflected the intent that the grants awarded were to be based entirely on merit and this was the main goal of the SPAG Committee.

The Body of Knowledge Committee report had been submitted according to Henry. The goal he explained was to have the individual state engineer licensing boards require that a master's degree in engineering or a baccalaureate in engineering plus an additional 30 semester hours defined in the body of knowledge as a prerequisite to take the professional practice examination. As an indication of the partnering in the effort toward higher education standards for engineers it was mentioned that the President of the National Council of Examiners for Engineering and Surveying, the organization of engineering and land surveying licensing boards, and the President-Elect of the Accreditation Board for Engineering and Technology have recently attended and participated in meetings of the ASCE national Board of Direction.

The reason for the proposal to change the governance of the ASCE according to Henry was to improve ties between the national organization and the sections and branches and to get more members involved in national committee work. The smaller Board makeup was discussed noting that the 20 district and 4 zone representatives would be replaced with the new 9 region representatives and there were multiple paths through the ASCE to membership on the Board when previously there was only one through the political structure of the sections, districts and zones. With the change in governance, Henry anticipates more interaction between the national and the local levels of the ASCE.

The Section will contribute an awards plaque to the Louisiana Engineering Society for its Future Cities competition. The Section will also contribute to the cost of the Louisiana Engineering Society's sponsorship of the Presidential Reception in Hawaii for Bobby E. Price, PE, the incoming President of the National Society of Professional Engineers. The Section budget would have to be reviewed before an amount could be set.

Other transactions included the following:

- The Section will seek professional services to maintain its website.
- Consideration of the approval of budget for the 2003-2004 administrative year was tabled.
- Norma Jean Mattei, PE, was selected as the Section's caucus delegate for the Zone II Management Conference.
- Deborah D. Keller, PE, of the New Orleans Branch and Ashley T. Sears, EI, of the Shreveport Branch will be sponsored by the Section to attend the Government Relations Workshop.

Career Connections

Younger Member Newsletter (Winter '03 - '04)

ASCE introduces an exciting new benefit of membership: the Career Connections online job bank and resume service. In response to member requests, ASCE takes a step toward helping engineering employers and employees make "connections."

At no cost, you can post and update your resume, search the job-listing database, receive emails with jobs that match your profile, apply for jobs directly from your website, and participate in the ASCE Salary Survey.

With Career Connections, engineering employers can post job listings in real time, track online activity to measure advertising results, search the resume database for matching candidates, and receive auto-notifications on new prospects that meet their specified requirements.

Be sure to post your resume by January 31 for entry into a drawing for an Apple iPod digital audio player.

Start your future today with ASCE Career Connections — go to www.asce.org/careers.

Editor's note: The Section Board of Directors considered something similar to the Career Connections job bank to be placed on the Section website when it was under initial development. With some regret, it was decided at the time that the effort to maintain and operate such a service effectively did not fit easily into the Section's volunteer member service environment that would support the website. Since there were specialized websites available that offer resume and job availability posting services for potential civil engineering employers and employees, the Board opted not to support a job bank for the Section. Now the opportunity emerges as a national ASCE membership asset.

— net surfing—

ASCE national organization:
http://www.asce.org

Note: Most ASCE-related pages can also be addressed through links at this website. All section and branch officers are listed at:
http://www.asce.org/gsd/localofficers

ASCE Acadiana Branch:
http://www.asceacadiana.net

ASCE Baton Rouge Branch:
http://branches.asce.org/batonrouge/index.htm

ASCE New Orleans Branch:
http://www.asceno.org

Louisiana Tech ASCE Student Chapter:
http://www.latech.edu/tech/orgs/asce/

UNO ASCE Student Chapter:
http://www.uno/~engr/asce/asce.html

ULL ASCE Student Chapter:
http://www.engr.usl.edu/cive

Tulane ASCE Student Chapter:
http://www.tulane.edu/~asce

LSU ASCE Student Chapter:
http://www.ce.lsu.edu/~asce

ASCE Louisiana Section:
http://www.lasce.com

Louisiana Engineering Society:
http://www.les-state.org

Louisiana Professional Engineering and Land Surveying Board:
http://www.lapels.com

Highlights of the March Board of Directors meeting

The Board met in Shreveport in conjunction with the Section Annual Spring Meeting and Conference hosted by the Shreveport Branch. Eric Hudson, PE, reported that the Conference was going well with about 80 in attendance who are registered, 12 exhibitors and about 12 speakers. The Board congratulated him and his committee on their effort and it was noted that the Section would contribute the $1800 budgeted to cover part of the cost of the Conference.

Norma Jean Mattei, PE, reported on the Zone II Leadership Conference workshop that was well attended and deemed successful. The only items covered that are of specific interest to the Section were the discussions about the continuing evolution of ASCE Policy 465 and the proposal to restructure the national governance of the ASCE.

The Section website needs to be updated and it is hoped that this will be accomplished during the next 2 months. It was questioned whether the secretary the Section shares with the Louisiana Engineering Society may be able to make updates. This will be looked into as a possibility.

The Board responded to the solicitation from the Louisiana Engineering Society to be a sponsor of the National Society of Professional Engineers President's reception for incoming NSPE President, Bobby E. Price, PE, with a $500 contribution.

Ashley Sears who was sponsored by the Board to attend the ASCE legislative lobbying seminar in Washington reported what she believed the important outcomes of the seminar for her were

- meeting with Rep. McCreary of Shreveport
- learning about a new bill to assist smaller communities in upgrading their water systems and
- learning there was a bill to do away with qualifications-based selection for engineering services in Louisiana.

The Section leadership has interest in building an active legislative effort through the service of Ashley and others who attend this seminar.

The Board was advised that the ASCE national governance proposal will be on the July ballot for the election of the membership. As previously discussed, it does away with the current Districts. The current proposal on the table for the new regions would combine District 14 and District 10 — the state of Florida — into a new region. The Section is part of District 14 and its leadership does not consider the new alignment objectionable. The prospects of the governance proposal passing are considered excellent based on a history of the national membership approving all changes recommended by the national Board of Direction.

The office of District 14 Director will be open in the next election cycle. Though member sections of the District are normally in a rotation to provide an official nominee, finding a nominee for this election cycle is problematic. The nomination is needed by March 24, 2004 and the Louisiana Section may be asked to provide the nominee out of turn. Featherston has spoken to one person and asked for suggestions from the Board. Ruppert suggested any past president of the Section would probably make a good district director.

It was suggested that more large display advertisements would be desirable for the journal. There was discussion concerning the possibility that the Section could offer a link on its web page in addition to the advertisement in the journal at no extra charge as an added incentive.

The Section Nominating Committee report was presented. The slate of official nominees to be candidates to stand for election to the Section's offices during the section membership meeting — the Section Annual Spring Meeting. One nomination was not filled by the Committee — the Director-at-Large from the New Orleans Branch. Charles L. Eustis, PE, was selected by the Board to fill the position until such time as the New Orleans Branch provides a Director-at-Large.

HB1342

State Representative Troy M. Hebert, a Democrat from District 49 (Iberia and Vermilion Parishes) with offices in Jeanerette, Louisiana, whose occupation is listed as the oilfield equipment rental business pre-filed House Bill 1342 for the 2004 Regular Session of the Louisiana Legislature. The bill, if adopted into law, will truly be a poison pill for the engineering profession for providing engineering services to public entities in Louisiana and to these public entities that rely on them. Judging from the immediate response to it from some engineers, the bill is considered an act of pure effrontery.

The essence of Hebert's bill is to amend and reenact LRS 38:2211(A)(10) relative to the Public Bid Law and LRS 38:2310 relative to the State Procurement Code. It would place contracts with engineers under the Public Bid Law along with the contracts for making public works and the purchase of materials or supplies. It would simultaneously eliminate engineering contracts from being defined as *professional* services in — and exclude them from — the Procurement Code.

Consider this, if you ever have cause to wonder why affiliate societies such as the Louisiana Section of the ASCE and the Louisiana Engineering Society of the National Society of Professional Engineers should even exist considering that they seem so dedicated to such things as soliciting funds for social events of curious if not questionable value. It would be reasonable for you to assume that representatives of the Section and more particularly the LES will be working behind the scenes and in Legislative committee hearings if necessary to defeat this and other such bills that are clearly — at lease for those with a depth of understanding of the issues — not in the interest of either the engineering profession or the State of Louisiana.

Without such organizations and their constituents at the state level where engineering licensure and public contract law is encoded and given substance, engineering would probably not be considered or treated like a profession today. Through the prominence these organizations have earned we — as a profession — try to be ever alert to ferret out the poison pills such as HB 1342 that are typical in most legislative sessions and to successfully support legislation beneficial to the profession which is even more difficult. If not them – Who else?

— Calendar of Events —

June 3-4, 2004	**ASCE Seminar * on Hydrologic and Hydraulic Design of Culverts in Little Rock, Arkansas.**
August 19-20, 2004	**ASCE Seminar * on FEMA in Nashville, Tennessee.**
September 9-10, 2004	**Louisiana Civil Engineering Conference and Show in Kenner.**
September 10, 2004	**Section Annual Meeting in New Orleans.**
September 17, 2004	**Tulane Engineering Forum "Advanced Technologies for Homeland Security" in New Orleans (www.eng.tulane.edu/tef). For more information contact Jenny Kottler at 504-891-1044 or jkottler@bellsouth.net.**
September 23-24, 2004	**ASCE Seminar * on Structural Condition Assessment in Houston, Texas.**

*** For more information, call ASCE toll free at (800)548-2723 or visit the ASCE web page www.asce.org.**

Governance/alignment proposal

A recommended new political alignment of 9 proposed geographic regions has been recommended by the national ASCE Board of Direction. It is deemed to be consistent with the proposed constitutional revision for national governance scheduled to be considered by the ASCE membership on a ballot this Summer. The political alignment proposal was placed before the membership for comment by a letter to the current Society leadership from Blaine Leonard, the chair of the Governance Restructuring Implementation Committee, dated February 19, 2004. The proposal would replace the current political alignment of the 4 zones and their several districts each. The Louisiana Section specifically would be placed in the new proposed Region 5 that would combine the current District 14 in which the Louisiana Section is now located and District 10 that includes the whole state of Florida.

The current national zone, district and section political alignment can be found on the ASCE national website — www.asce.org — sidebar menu *Sections & Branches.* The proposed geographic regional alignment can also be found on the ASCE national website — sidebar menu *Members Only* — popup menu ASCE *News Online* — popup menu *Governance Restructuring Model...* Comments should be directed via email to Wendy Cowan — wcowan@asce.org — as soon as possible but no later that May 1, 2004.

Candidate for District 14 Director nominated

The District 14 Council Chair, Tony D. Fagan, PE, announced to the leadership of all of the sections under its auspices — this includes the Louisiana Section — that on March 23, 2004 at the close of voting the Council nominated Steve McCutcheon as a candidate for the office of District 14 Director to serve during the 2005-2007 term. McCutcheon is scheduled to be the ASCE official nominee for the office on the ballot for the next national ASCE election.

We are reminded that the proposition for the reorganization the governance of the National ASCE will be decided in the same election. Depending on the outcome of this election and how rapidly the ASCE can transform itself to its governance structure if the proposition passes, the office of District 14 Director may cease to exist sometime during the 2005-2007 term.

If all of this comes to pass — and all indications are that it will — McCutcheon, if elected, should be the last District 14 Director to serve our district. The current 21 district directors serving on the national ASCE Board of Direction will be replaced with 9 regional representatives. District 14 and District 10 — the state of Florida — are proposed to be merged to form Region 5 — one of the 9 regions that will replace the districts.

- Career Benchmarks -

Section members **John R. Bernard,** PE, **Thomas H. Buckel,** PE, **Dante O. Fratta,** PE, **William M. Hays,** PE, **Mark A. Killen,** PE, **Daniel S. MacDonald,** PE, **Paul D. Miller,** PE, **Herbert E. Moore, II,** PE, **David A. Pertuit, Jr.,** PE, **Thomas B. Ponder, II,** PE, **Daniel J. Tullier,** PE, **Karla E. Weston,** PE, recently earned their civil and/or environmental engineering license in Louisiana. If you are in contact with any of these engineers, please offer them your congratulations on their accomplishment.

Louisiana residents **Maryella Begley,** PE, **Charles P. Brandstetter, IV,** PE, **Kye F. Cantey,** PE, **Michael M. Darby,** PE, **Scott E. Develle,** PE, **David A. Einsel,** PE, **Lloyd R. Erikson, III,** PE, **Craig J. Fuselier,** PE, **Gretchen S. Hammond,** PE, **Kirk J. Henry,** PE, **Ryan C. Koenig,** PE, **Lucien M. Larche,** PE, **John D. Maiden,** PE, **Robert C. Myers,** PE, **James E. Powell, Jr.,** PE, **Mohammed K. Sardar,** PE, **Debra A. Stanley,** PE, **Beau J. Tate,** PE, **Kevin C. Vanderbrook,** PE, **Jennifer Ann Wedge,** PE, recently earned their civil and/or environmental engineering license in Louisiana and are not members of the ASCE. A copy of this issue of the journal is sent to them as an informal introduction to the Section. If they wish to join and/or find out more about the ASCE, they are hereby encouraged to visit the ASCE national website, http://www.asce.org. If you are in contact with any of these engineers, please consider formally introducing them to the Section by inviting them to attend a branch meeting as your guest.

Editor's note: As a matter of interest, there are two other disciplines that are now licensed by the Louisiana Professional Engineering and Land Surveying Board and that may be considered closely related to civil engineering as is the environmental engineering discipline. They are the architectural and structural engineering disciplines. As of January 2004, there were 0 and 55 licensees registered with the Board in these two engineering disciplines respectively.

President's address

By Barry P. Gahagan, PE

Returning home last Friday from our LES state board meeting in Lafayette, I reflected on the varied topics at issue and on the backgrounds of the two dozen or so (board) members who have committed themselves in service to their profession. With this time on my hands as I drove alongside truckers heading east across the Atchafalaya Basin, I was taking home a sense of respect for these officers and directors who, despite their demanding careers and family lives, have made such commitments of time and effort in service.

While the issues of the day were often heavy with consequences beyond this group, it was apparent that there was no posturing for privilege or recognition. This was a meeting of peers joined to promote, enhance and preserve the profession of engineering. Issues included the recommendation of professionals for the Governor's selection to our state board of registration (LAPELS), the discussions of the organization's position regarding upcoming design-build legislation and the mundane issues of ballot casting procedures for the upcoming state elections. As the 2003-2004 year will soon be drawing to a close, Spring is upon us and we can look forward to a renewal of LES through this month's elections and committee appointments.

In a brief discussion with State President-Elect Phil Meyers, we touched upon his upcoming responsibilities and the challenges of the commitments; and compared them to similar commitments held by those individuals who had served before. There had been a sense that perhaps the professional engineers of generations past had more time available; that their lives were somehow not as hurried. Then the recognition that no; what we had then was a strong sense of duty and purpose. Those such as Tom Brokaw had referred to as our finest generation were common individuals who — after learning at a very young age what was truly important in life — returned (home) to lead lives of service to their communities through their profession and beyond.

My hope is that we take a page from our forefathers (record). Cast your ballots for both the state and chapter officers. Offer your assistance to the incoming leaders. The truth remains that so many of our committees that provide real value to the organization remain understaffed. My challenge to the LES membership is to step up and be counted. A successful and rewarding Chapter (effort) can only be achieved through an active membership...

Editor's note: I find it so rare that a sense values and personal perspective relative to the experience of service to the engineering profession are the subject of a message from our elected leadership. Who really cares that there was a nondescript membership meeting held Friday, April 1, 2003 at 11:45 am in the bowels of this-or-that restaurant, etc. It was like a breath of fresh air to read Barry's president's address in the April 2004 newsletter of the Baton Rouge Chapter of the Louisiana Engineering Society. It cut straight to my heart. I have experienced the same feelings that Barry expresses better than I could even imagine doing and I suspect that all of us who share this common experience can genuinely appreciate what he shares. I think that it should also serve as inspiration for those of us who have not had the opportunity and/or the experience to serve our profession to actively seek them out.

Board of Directors elected

Section members in attendance during the Annual Spring Meeting elected the Section Board of Directors for the 2004-2005 administrative year. They will take office following their installation during the Annual Meeting, September 10, 2004 in New Orleans.

Officers:

Section members elected the following slate of officers with the exception of the President who assumes the office after having immediately served the previous term as the President Elect and the Past President who will continue on the Board after having immediately served the previous term as the President:

- Norma Jean Mattei, PE, President
- Kim E. Martindale, PE, President-Elect
- Timothy M. Ruppert, PE, Vice President
- E. R. DesOrmeaux, PE, Secretary-Treasurer
- Barbara E. Featherston, PE, Past President

Directors-at-Large:

- J. Keith Shackelford, PE
- Ali M. Mustafa, PE
- Patrick J. Landry, PE
- Charles L. Eustis, PE

Assigned Branch Directors:

The assigned branch directors are intended to provide more balanced representation on the Board of Directors for the larger branches in the Section. These two directors are appointed by the Board of Directors of their respective Branches before July 31 otherwise they are appointed from the Section at-large by the Section Board of Directors.

- Daniel L. Bolinger, PE (New Orleans)
- Thomas A. Stephens, PE (Baton Rouge)

Appointed Branch Directors:

Each branch appoints a director to one term and to serve at the pleasure of the Branch. Usually the branch president serves in this position.

(Continued from Page 13)

The Department of Civil Engineering is proud of its students and pleased with the professional development they have gained through their volunteer Chapter activities. The Department is looking forward to the Chapter's participation in the Conference competitions next year with as much interest and enthusiasm as are the returning Chapter members.

The UNO Student Chapter steel bridge team during the 2004 Deep South Conference and the timed construction portion of the steel bridge competition.

The UNO Student Chapter environmental competition team in action during the 2004 Deep South Conference.

Did You Know . . .

...that founded 90 years ago in 1914 the Louisiana Section is celebrating its 90th anniversary this year? The branches were founded as follows:

- Shreveport Branch in 1953
- Baton Rouge Branch in 1962
- New Orleans Branch in 1962 and
- Acadiana Branch in1982.

...that there are 15 plastic highway bridge spans that are either finished or in the works in Ohio and that New York has 7 plastic highway bridge spans that are in service?

- Wall Street Journal

...that the National Society of Professional Engineers provides its members with a special service by periodically providing by title, synopsis and reference, 10 current news items from various online news sources that are selected to be of particular interest to a broad spectrum of professional engineers? NSPE Members may subscribe by e-mail at press@nspe.org.

...that the Texas Board of Professional Engineers licenses software engineers? There is no licensing examination at present. Educational requirements limited to board-approved engineering, computer science, high level math or science degrees and the minimum experience required is 16 years of software engineering. The experience requirement is 12 years of software engineering for a candidate with a degree from an ABET (Accreditation Board for Engineering and Technology) accredited engineering program.

- Licensure Exchange, NCEES

...that managers through monitoring the temperatures on their PCs in the recently completed One Verizon Way building in Thousand Oaks, California have reduced its HVAC costs by nearly half.

- Mechanical Engineering 6/2/02.

...that half the civil engineering profession is employed in private practice and a third of it is employed in government — federal, state and local.

...that veteran engineer, Larry W. Emig, with the Kansas DOT collaborated with the National Society of Professional Engineers to launch an annual national campaign for safer driving. Put the Brakes on Fatalities Day scheduled for October 10th includes events urging people to buckle up, stop speeding... Acknowledging that engineers are major players in traffic safety designing facilities, vehicles and traffic control devices, the NSPE works with engineering, transportation, safety groups and federal agencies to establish this safety initiative now in its second year. The date was chosen because of the higher-than-average highway fatalities in October.

- Kansas City Star 10/10/02

Is your portfolio positioned for 2004?

By Thomas R. Thurmond

With the 2003 equity markets having experienced their first positive returns in four years, investors finally have a reason to applaud. But with a new year comes the question of the market's outlook going forward and a reminder to rebalance your portfolio with a suitable asset allocation strategy.

Why does asset allocation matter?

After an almost 20% return on the S&P 500 and a 40% surge in the NASDAQ, one can certainly make the case that the easy money has already been made. Simply riding the wave is no longer an option. Rather it is imperative to protect your portfolio against a possible downturn while positioning your holdings for the best possible returns. Your asset allocation decisions are critical in balancing these two needs. In fact, history has proven that exercising a sound asset allocation strategy has a larger impact on a portfolio's returns than picking individual securities.

How can I use asset allocation strategies to my advantage?

In its simplest form, asset allocation will offer a basic means of balancing and rebalancing your portfolio to suit your individual investment profile and objectives. It can also be used to help implement your particular investment style and aid you in diversifying across various industries or sectors.

- *Balancing your portfolio to your investor profile.* Traditional asset allocation is based on three primary asset classes: stocks, bonds, and cash. This should depend on your outlook, timeframe, and risk tolerance. Conservative investors, whose primary concern is protection of principal, should generally have less exposure to equities and a larger portion of their assets devoted to fixed income. More aggressive investors may wish to be more involved in stocks.
- *Weighing growth vs. value.* When the market is booming, growth stocks usually outperform, but when it's not, value stocks tend to shine. While you cannot predict the future, you can allocate your assets with a suitable mix of both growth and value in a way that properly addresses your outlook and needs.
- *Diversifying exposure across all sectors.* The old cliché, never put all your eggs in one basket, rings especially true with stocks; it has become increasingly evident that it is crucial to diversify your holdings throughout the various sectors of the economy. Too much exposure to one area can be risky and keep you from benefitting from positive performance in other sectors. For example, an investor who had most of his or her money invested in Industrials in 2003 would have faired well through the 3rd quarter, with 17.7% return, but would have missed out on participating in the even better 36.5%* performance of the Technology sector. Many Wall Street strategists now offer recommended weightings on sector allocations in a model portfolio compared to the S&P 500.

* 2003 Performance figures through September 22, 2003.

Thomas R. Thurmond, Senior Vice President, Financial Advisor with Morgan Stanley in New Orleans, Louisiana. He may be contacted by e-mail at thomas.thurmond@morganstanley.com or by telephone at (504)587-9669 or (800)659-0009.

Editor's Journal

By James C. Porter, PE

Global economy

Should the environmental and workplace regulations in the United States be considered draconian to the economy when compared to the *benefits* they provide? This may be an important question when the resulting costs to business are compared to those in the less regulated global community. The domestic costs for these regulations, along with the comparatively heavy tax burdens on wealth generated, the high wage and benefit packages for labor, and the correspondingly high minimum wage, apparently come with consequences — encouraging domestic businesses that compete in the global economy to move facilities and jobs offshore.

> *It is the maxim of every prudent master of a family never to make at home what it will cost him more to make than to buy.*
>
> - Adam Smith 1776.

In a global economy where competing businesses are free to move beyond national boundaries to the more inviting of the global business climates, the cost of doing business related to regulation, political stability and the workforce available for example would appear to be part of the forces driving the geographic location of businesses, and jobs. The extent and the short-term effect of the "jobless recovery" in the United States may or may not be overstated. However, it also may explain in part an investment climate consistent with the excellent prospects of high profitability expected from the movement of domestic businesses offshore to less regulated business climates and lower paid, competent labor. It makes clear sense for their economic survival.

The current administration appears to be confident that leaving the domestic market mostly open to the economic forces in the global market will result in long-term good consequences. The connection between the domestic regulatory climate governed by health, safety and welfare priorities and its consequences on the economic climate — driving some of the loss of domestic businesses and jobs offshore — seems well appreciated according to the political rhetoric as do some alleged *incentives* in the federal corporate tax code. One quixotic solution proposed is the imposition of the domestic regulatory climate on other nations or closing the market between the United States and those nations who refuse to, thereby "balancing the playing field." Another solution is to penalize domestic businesses for moving offshore through punitive revisions to the tax code. This would surely include eliminating incentives in the code deemed to facilitate domestic businesses moving jobs and facilities offshore.

Historical precedent would suggest that the failure of a business to follow Adam Smith's maxim to search for and exploit the best labor resources and the least costs available globally has economic consequences — loss of competitiveness and ultimate failure. Before — and leading up to — this failure it is anticipated that consumers will pay more, investors will have less to invest and there will be less job creation.

It may be more appropriate for serious introspection concerning the cost to the economy of some domestic priorities and the resulting regulatory climate — an avoided and/or neglected engineering and economics problem. Are the regulations and their costs reasonably balanced against the forces driving competition in the global market and their effect on domestic economic prosperity? Is it prudent to attempt to impose political influence over the business regulations of our trading partners or control over the profitability and competitiveness of domestic businesses by punitive regulations that restrict trade, increase costs and cripple competitiveness? Is this any way to treat our *partners* — ourselves?

It would appear that the anemic job growth perceived in an otherwise robust domestic eco-

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Engineering education and employment

It is getting so tiresome! The *education-industrial complex* continuously whines about the potential shortage of engineers considering that the BS degrees earned in engineering have precipitously declined over 20 percent from the 77,572 peak in 1985 to 60,914 in 1998. There are many forces driving this trend and related concerns. It may be observed that

- a large portion of the population of practicing engineers are baby boomers reaching retirement age
- the job market for engineers may become chronically affected by the migration of site-independent engineering work to the competition overseas
- the job market for engineers has and will continue to be chronically affected by the displacement of labor-intensive engineering services by the proliferation of engineering software applications
- there is immigration of competing foreign national engineers into the job market, and
- underemployed and unemployed engineers are making career-ending occupation changes to survive economically.

The whining from academia suggests that the civil engineering curriculum is *too tough*, and innovative ways should be sought to make it easier or more palatable to the 40 percent of the entering freshmen who drop out. In the face of sagging demand for engineers, civil engineering departments are busting a gut to make the civil engineering curriculum more palatable by shifting prerequisites — repackaging.

As the engineering profession enters a 3rd feast-to-famine job market cycle that I can remember witnessing, it seems that nothing appears to be learned from history. No doubt the continuously rosy yet irrational prediction of high immediate and long-range demand for engineers will continue largely unabated and largely ignored. Like the time on a broken clock being right twice a day, this *prediction* inspires neither confidence nor a serious audience. The motivation for it appears to be an attempt to encourage an oversupply of engineers with low compensation in industry and to encourage an oversupply of undergraduate students to justify enlarging university engineering faculties and facilities' research capacity.

In the absence of honest and reliable job market demand predictions, the only reliable information is the current demand and compensation in the market. This appears to cause the supply of engineers to fluctuate nearly 180º out of phase with demand.

- *The engineering curricula accept increasing numbers of students in response to emerging competitive compensation and strong demand for engineers.*
- *This results in an oversupply of engineers with poor compensation.*
- *Student interest quickly wanes and the output of graduate engineers precipitously declines.*
- *The oversupply dissolves and a demand for graduate engineers with competitive compensation re-emerges.*
- *The engineering curricula accept increasing numbers of students in response to emerging competitive compensation and strong demand for engineers.*
- *And so on infinitum.*

The best sense I can make of this observation is that the number of engineering BS degrees produced is purely market driven. All of the panicky talk about shortages is perceived as just talk and all of the lies about demand are perceived as just lies. If prestige, opportunity, compensation and demand for engineers are reasonable, then the curriculum will not be too tough for the entering freshmen thus motivated and the supply of competent and successful graduate engineers will be adequate.

It would seem that if the education-industrial complex was truly concerned about its students and employees — Heaven forbid! — and truly understood its own best interest; it would have disciplined itself long ago to provide realistic predictions instead of hyperbole about the engineering job market. This would have built confidence and credibility in their message that may have eventually gotten the supply of engineering graduates in phase with demand and thereby stabilized compensation and made engineering a much more attractive profession and career.

As is commonly observed, the globalization of the engineering job market is being driven by advancing computer and communication technology. It is redefining the practice of engineering in the context of both *how* and *where*. Given the technology available, a substantial force driving the *where* component is cost. The engineering work will move in the global market to the engineers available at lower compensation, and the engineering costs and compensation will average out over time on a global basis. This will likely reduce the engineering costs in the United States, but it may not bode well for its engineers whose compensation is presently among the highest in the world.

The education-industrial complex in the United States is probably in the early stages of being marginalized as the prime supplier and user of undergraduate engineers in a global sense. Though it may never effectively address the real dynamics of supply and demand for engineers and engineering students in the market — global or otherwise — the need to do so may be being rendered moot.

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nomic recovery may indicate that job creation while significant is not sufficient to support an equally robust recovery of the domestic job market. This appears to be caused by the economics driving the offshore placement of so many of the jobs being created. The offshore placement of domestic jobs has been dubbed *outsourcing.* This is a term that was once used to describe the jobs in the vertically integrated businesses that were not part of their core business activity and that were contracted out to more efficient specialty contractors to improve competitiveness.

Unlike the recoveries in recent economic cycles when mostly blue collar manufacturing jobs were lost to outsourcing, white collar jobs are also expected to be lost to outsourcing facilitated by internet communications. I would add they may also be further devalued by the continuing growth of automated high tech applications. If white collar jobs experience domestic decline and devaluation, it would appear that engineering will not be immune. In the short range, outsourcing is expected to only *modestly* depress compensation for — and the growth of — domestic white collar labor. It is estimated by Forrester Research — a highly regarded industry analyst and monitor — that of the current 140 million domestic tech and professional jobs that are increasing as the economy recovers, 0.6 million — 0.4% — will move offshore by 2005 and 3.3 million — 2.4% — will move offshore by 2015.

> *A million American workers... currently leave their jobs every week, two-fifths involuntarily... A million, more or less, are also newly hired... every week. This process is not new, (and we) can be confident that new jobs will replace old ones, as they always have.*
>
> - Alan Greenspan, Chairman
> Federal Reserve Board

The net loss of blue collar jobs was and will continue to be painful and clearly outside of the laborer's control. For this reason, it is rationalized by many that an appropriate role of government is to soften this pain through subsidy including the cost of retraining. A loss of white collar and more particularly professional jobs may not — and possibly should not — be viewed with as much sympathy for those affected. This is because the loss of professional jobs is not as clearly outside of a profession's control on the whole. Further, the continuing education required of a professional may also preclude the need for retraining.

For example, proactive innovation and efficiency — value added — in engineering practice even within the domestic regulatory environment can have a direct and important effect on the competitiveness of civil and environmental engineers and the portion of the work and their jobs that will be outsourced. Also, domestic engineering businesses have the opportunity to directly compete in the global market by developing and providing services via the internet.

With the current salaries of engineers offshore being as little as one-fourth of domestic salaries, global competition for jobs is surely an uphill battle. It is observed that as the offshore engineering jobs grew in India for instance — outsourced jobs grew there 60% in 2003 — the salaries of these engineers escalated rapidly and thereby made them less competitive. The more serious long-term problem appears to be that there are substantial numbers of engineers being

(Continued on Page 21)

Performance conflict

Without conjuring up the extremes of good and evil that would be inappropriate to describe the dispositions of the individuals in a recent meeting where it was attempted to resolve a problem described as chronic poor performance, there was a spectrum of behavior observed among the beleaguered participants. They were trying to focus on the problem each from their own perspective. With a parody of The Good, the Bad and the Ugly, I would characterize them by their dispositions as the sweet, the sullen and the sour.

- The sweet was the distant administrator who was ultimately in charge yet not directly connected to the work in question and who would decide the fate of the proceedings.
- The sullen was the supervisor who was feeling put upon to defend the allegation of poor performance and maybe a little embarrassed by the spectacle.
- The sour was the individual employee whose alleged poor performance had been called into question.

Once the evidence and the issues delineating the significant dimensions of the problem of the alleged poor performance were on the table, a redefinition of what had been considered satisfactory performance expectations was forged, and agreed to — or at least not disagreed with. The meeting adjourned shortly after the employee agreed to meet the redefined expectations. With the problem that caused the discord identified and an apparent solution forged the way it was, this may be considered conflict resolution to some. However, the employee's sour disposition appeared to remain and the supervisor's disposition appeared to have soured from a resentment of the redefined performance expectations. This appeared to leave a lot of opportunity for future conflict. It seems to me that the journey to the conflict resolution needed in this situation had just begun.

(Continued from Page 20)

educated offshore compared to their number being educated domestically. This may tend to depress offshore engineering salaries long-term and further accelerate outsourcing in the future.

It should be evident that the past failure of civil and environmental engineers to effectively participate in the domestic regulatory legislation and rule making that uniquely affect — and apply to — their practice may have had profound effects on the cost of doing business in the domestic economy. They conceded substantive participation in — and/or control of — this regulation development to technologically illiterate attorneys and political hacks with little interest in effectiveness or concern about costs (efficiency). In doing so, they may have allowed the enactment of ineffective and costly regulations that result in unnecessary loss of domestic competitiveness in the global market. If so, this will continue to be a hard lesson from which the engineers affected can and must recover through being more politically assertive in the future.

The conventional government measures used to curb an economic recession are

- cut interest rates
- run a budget deficit, and
- cause or allow the currency to depreciate internationally.

The first two measures stimulate domestic spending and borrowing and the last measure shifts the balance of trade by making exports less expensive and imports more expensive. The current administration may have unintentionally added a fourth measure — relax enforcement of costly environmental regulations. This reduces business costs making products less expensive. All of these measures to stimulate the economy during a recession are viewed as temporary.

For the nation with a more depressed economy, the tendency is for a shift in its balance of trade toward exports to nations with less depressed economies. It is reasoned that its wages are more depressed and its businesses that survive its more depressed economy are more efficient, and, therefore, more competitive than the businesses that survive in a nation with a less depressed economy. The conventional government measures used to avoid the severity of an economic recession would tend to stabilize wages and forgive and perpetuate less efficient business. This would appear to result in less domestic competitiveness in the global market. The one non-government measure — proactive improvement in value added — suggested for engineering practice and that may be extended to other professional services would appear to be an exception.

The jobs that are being outsourced at considerable short-term pain to the domestic workforce may also be viewed as a form of *international job creation* with long-term benefits to the global economy vis-à-vis workforce. The effect may be explained by the simplistic model of the tide of economic recovery raising all ships (the global economy) including those of the beneficiary nations with less utilized, low-wage workforces.

If there are long-term benefits to the global workforce, it would appear that the political call for a strategy of domestic job protection measures is based on shortsightedness and a mentality of scarcity. Similarly, the political call for a domestic strategy to facilitate international job creation would appear to be based on farsightedness and a mentality of plenty. The former strategy would appear to offer no hope at all. The hope to be found in the latter strategy — if successful — would be the opportunity to facilitate long-term growth in the global economy. It would create a spectrum of jobs in the global market such that individual national job markets are more uniformly satiated. A great opportunity for success would appear to be through international cooperation among the more advanced economies. A great risk of failure could be at the hands of predatory government and business practices among the unregulated, more advanced economies.

A *partial* failure of the strategy to facilitate international job creation may manifest itself by some combination of higher unemployment and lower compensation for the workforce in the most advanced economies. The risk of partial failure of this strategy therefore bears mostly on the more advanced economies that have the most to give and something to lose compared to the more primitive economies that have nothing to give, nothing to lose, a lot to gain and no risk. The driving forces for the advanced economies to commit to this strategy would appear to be a national sense of confidence, optimism and generosity which may be alien to the domestic political culture and its vacuous debate.

As an individual, I would like to believe that my sense of confidence, optimism and generosity is important and ingrained enough in my values and in the values of a critical mass of others to the extent they overcome the risk adverse nature in the more advanced economies. If there are enough constituents who can understand and accept the risks in this context, the strategy to facilitate international job creation may effectively weave its way into the domestic political culture.

Editor's note: I am an employed engineer who is affected by — rather than competes directly in — the global economy. Motivated mostly by fear, I have been following the recent discourse in the news media about the economic forces affecting businesses and jobs — particularly my job — in the United States. What I discovered and concluded inspired me to share my thoughts through this article. It is based primarily on the following references:

"Is Your Job Going Abroad?" by Jyoti Thottam, *Time* 3/1/04.

"Exporting Lou Dobbs and John Kerry" by James K. Glassman, Tech Central Station 2/11/04, an online journal at www.techcentralstation.com.

❖ Quotes ❖

Life Style: *There is part of us, I think, that loves hurtling through the day at a million miles an hour. We feel relevant, as if we are going places. Being busy is a way of creating a stage-set of success... But the obvious question is always just below the cluttered surface, trying to push its way through: What are we hurtling toward?*

- Joan Ryan
  Columnist

Ethics: *It's my opinion that every one I know has morals, though I wouldn't like to ask. I know I have. But I'd rather teach them than practice them any day.*

- Mark Twain

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