

LOUISIANA CIVIL ENGINEER

Journal of the Louisiana Section

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ACADIANA • BATON ROUGE • NEW ORLEANS • SHREVEPORT

FEATURE:

Rockefeller Refuge Gulf
Shoreline Stabilization
Demonstration Project

NEWS:

Louisiana Section Installation
Luncheon

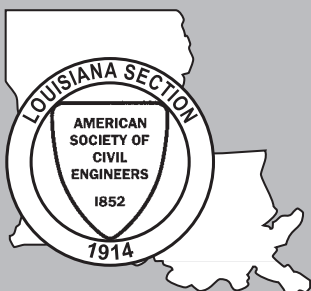
Section Awards

Engineering Your Way to
Management

The Role of Civil Engineers in
Reducing Roadway Departure
Crashes in Louisiana



Christopher P. Knotts, PE
2009-2010 President



NOVEMBER 2009
VOLUME 18 • NO 1

PROJECT PROFILE:

Cheniere Energy LNG Regasification Platforms

JOHNSON'S BAYOU, LOUISIANA

WASKEY



PROJECT TEAM MEMBERS

OWNER: Cheniere Sabine Pipeline, LLC, Houston, TX

PROJECT ENGINEERS: Wilbros Engineering, Inc., Tulsa, OK

STRUCTURAL ENGINEERS: Larry LeBlanc & Associates, Baton Rouge, LA

CONTRACTOR: Wilbros USA, Inc., Houston, TX

PROJECT DESCRIPTION

Winner of the 2008 American Concrete Institute's Best Concrete Project Award of Merit, the two WASKEY platforms at Johnson's Bayou are part of Cheniere Energy's Creole Trail Pipeline. The platforms work in tandem to support massive equipment that reheats liquefied natural gas, returning it to a gaseous state for transportation via pipelines that supply the southeastern U.S.

Located near the Gulf of Mexico, both platforms employ two of WASKEY's advanced hurricane survivability options, "Pile Nail" cap-to-pile connectors and "Surge Ready" panel-to-cap connectors, to resist wave uplift forces and high winds. The platforms survived Hurricane Ike and its record storm surge, in 2008, without damage to the structure.

TECHNICAL DETAILS

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The Louisiana Section is located in ASCE Region 5 that consists of the Louisiana, Mississippi, Alabama, Georgia and Florida Sections.

President's Message

By Christopher P. Knotts, PE

It is truly an honor to serve as President of the ASCE Louisiana Section for 2009-10. Started in 1914, the Louisiana Section has a proud tradition and it is a privilege to be counted among those who have served before me. Following past convention, I will strive to leave the Section a little better off than I found it. This will be hard to accomplish because I have had the pleasure of serving on the Board with several very dedicated Presidents. Timothy Ruppert, E. Ray DesOrmeaux and Ali Mustapha each served the Louisiana Section with distinction and I will endeavor to match their excellent leadership. Also, I wish to congratulate the entire Section Board on their recent installation. This is not a job that can be performed by a single person. It is just my turn at the helm and I look forward to working with the Board and each Branch to serve our profession.

The Annual Officer's Installation and Section Awards meeting was held on September 18, 2009 at Juban's Restaurant in Baton Rouge. The 2009-10 Section Officers were installed by Mr. Charles Eustis, PE, Past Section President. Patrick Landry, PE, President Elect emceed the Section's Awards presentation portion of the meeting. As usual, Patrick did an excellent job of making each award recipient and their family feel especially honored with a personal touch to the ceremony. There were eleven awards presented with recipients representing all four Branches in the Section. Ten of the eleven award recipients (or their families) were present at the luncheon to receive their award, which I believe is a record. I wish to convey my congratulations to all the award recipients for being recognized for your efforts and dedication to the Civil Engineering profession. This marks the second Installation and Section Awards meeting that has been hosted by the home Branch of the incoming President. The Board adopted this policy in 2008 to give each Branch's membership an opportunity to participate in the ceremony and hopefully see how the Section interacts with and can benefit the Branches. I believe the 73 people that attended this year's lunch meeting proved that this was a good decision by the Board. I wish to express my thanks to the Baton Rouge Branch leadership for hosting an excellent meeting.

As I begin my year as President, I finish what I consider to be a very productive year as President Elect and Publications Committee Chairman. With the "retirement" of Mr. James Porter as Journal Editor, the job of Publications Committee Chairman became much more than it had been for the previous 14 years. Mr. Porter handled everything associated with the journal during his tenure, which is no small endeavor. I am not the first to say this, but thank you Jim for your years of service to the Section and the Civil Engineering profession. With the assistance of our new editor, we managed to figure out how to continue the publishing tradition of

excellence that the Section has come to expect. The details of publishing the journal, the quest for interesting articles and the challenges of generating advertising revenues were all very interesting to me. I hope everyone found the 2008-09 Louisiana Civil Engineer Journals informative and useful. I am confident that as Patrick Landry steps into the role of Publication Committee Chair he will continue to make improvements to our excellent publication.

The Section publishes the Journal and maintains a website (www.lasce.org) as sources of information and services for our membership. You may already know that our newsletter has been recognized as one of the best in ASCE, as evidenced by our 2008 Outstanding Newsletter Award for Large Sections. We have submitted our 2008-09 journal issues for 2009 Outstanding Section and Branch Newsletter Award consideration. We have also submitted our website for consideration of a national award. If we are lucky, Patrick Landry will be collecting awards in February at the Section and Branch Leaders Workshop in Atlanta.

In recent years, several Branches have been successful in garnering State Public Affairs Grants (SPAGs). These have resulted in billboards, radio spots and civil engineering related materials distributed into classrooms. ASCE awards Small Grants (up to \$1500) and Large Grants (between \$1500 and \$7500). Branch leadership is busy preparing those proposals so that the Section can submit them to National prior to the October 30, 2009 deadline. Historically, the Section has provided funds to make up the difference when National has not fully funded proposals because this is an important part of our stewardship to Civil Engineering. Good luck to all our Branches!

In closing my first President's message, it is exciting to report that much information is already flowing from ASCE National to me on several issues. This month will be filled with many first. I have just completed my first Board of Director's meeting agenda and scheduled the years' Board meetings. I pledge to serve the Louisiana Section to the best of my ability and I look forward to a challenging and productive year.



Christopher P. Knotts, PE

Region 5 News

By E. R. DesOrmeaux, PE, F.ASCE

In addition to the Society Governing Board of Directors, various Region Boards represent ASCE Members, and its Sections and Branches. These separate Region Boards report directly to the Society Board of Directors. Region 5 includes Louisiana, Mississippi, Alabama, Florida, and Georgia.



E. R. DesOrmeaux, PE
Governor

The following ASCE Members represent Region 5:

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|-----------------------|-------------------|-------------|
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| Jorge Jaramillo, PE | Governor | Florida |
| Kate Leonard, PE | Governor | Alabama |
| Jackie Pettaway, PE | Governor At-large | Mississippi |
| Lisa Woods, PE | Governor | Georgia |

This year meetings were held at various locations throughout the Region, with supplemental meetings held through conference calls. These conference call meetings have been a successful way to conduct business when a limited number of specific items require discussion and decision-making, and enjoy the "side benefit" of being cost effective.

The next meeting is scheduled for Monday, November 9, 2009 in Jackson, Mississippi. The major agenda item is Strategic Planning for Region 5. This planning session will guide the Region in its initiatives and respective timetable of activities in coming years. A significant portion of this initiative is how the Region can best timely respond to the needs of the Sections, Branches, and all Members, providing for the representation as mandated by the ASCE Society Board of Directors.



Norma Jean Mattei, PhD, PE
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Rockefeller Refuge Gulf Shoreline Stabilization Demonstration Project

By Brett Geesey, EI and Dan Heilman, PE

Introduction

Over 25 square miles of wetlands are lost each year along coastal Louisiana. The reasons for the loss are many and complex and vary among different locations within the state. One of the most rapidly eroding portions of the Louisiana Gulf shoreline is at the Rockefeller Wildlife Refuge. Estimates of long-term shoreline retreat range from 30 to 40 ft/year (Byrnes et al. 1995). Severe storms such as Hurricane Ike in 2008 can cause more a year's worth of erosion over a period of a few days.

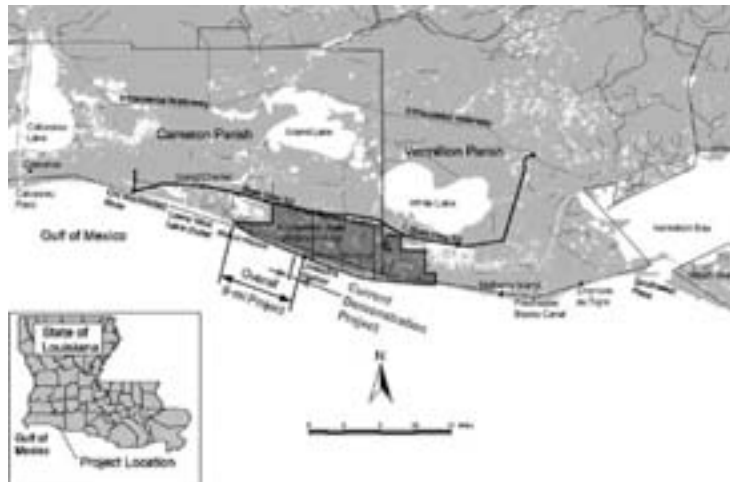


Figure 1. Project location map.

To combat the loss of wetlands at the Rockefeller Refuge, the Louisiana Office of Coastal Protection and Restoration (OCPR) (formerly Department of Natural Resources, Office of Coastal Restoration) teamed with the National Marine Fisheries Service (NMFS) to implement the Rockefeller Refuge Gulf Shoreline Stabilization Project (ME-18, CWPRA Priority Project List 10). The project intent is to halt erosion along the 9.2 mile portion of the Refuge west of Joseph Harbor Bayou ("Joseph Harbor"). Due to the challenging soil conditions at the site, a smaller demonstration project utilizing several alternative shoreline protection designs is currently under construction. The project was initially funded and authorized in accordance with the Coastal Wetlands Planning Protection and Restoration Act (16 U.S.C.A., Section 3951-3956) and the demonstration project is presently funded through the Coastal Impact Assistance Program (CIAP).

Site Description

Rockefeller Refuge encompasses approximately 76,335 acres of southwestern Louisiana and borders the Gulf of Mexico for 26.5 miles. The Refuge is one of the most biologically diverse wildlife areas in the nation and annually serves over 150,000 wintering waterfowl. The area also hosts an abundance of other species including raccoon, mink, otter, muskrat, rails, white-tail deer, alligators, opossum, and nutria. Marine species include a dense population of redfish, speckled trout, and black drum as well as shrimp and crabs, which are available for recreational fishermen (Louisiana Department of Wildlife and Fisheries, 2005).



Brett Geesey, El

The focus of the present project is protection of the western 9.2 miles of Gulf shoreline along the Refuge from Joseph Harbor to Beach Prong (Figure 1), with the demonstration portion of the project located just west of Joseph Harbor. The beach along the project area is mostly composed of exposed marine clays

with a ridge of crushed shell above the water line that is backed by extensive marsh. The area is directly exposed to waves and currents from the open Gulf of Mexico, and high tides and/or storms, especially during tropical cyclones, produce considerable erosion.

Design Considerations

During the Feasibility Study (Shiner Moseley, 2003), potential project alternatives were initially evaluated based on their ability to meet the following criteria:

- Prevent beach erosion for up to Category 1 hurricane conditions, which were estimated to have a return interval of about 10 years at the project site.
- Be designed, constructed, monitored, and maintained over a 20-year design life for \$42,000,000 with a construction cost of about \$38,000,000 or \$785/ft.

In addition to the criteria stated above, where practicable, the protection should remain stable for more severe storm conditions up to a 100-year event. To find a shore protection method that would meet these criteria, an alternatives identification and evaluation was performed. The low bearing capacity of the soils severely limited the type of shoreline protection that could be built and provide the desired protection.

Characterization of site conditions involved extensive data collection and analysis which included topographic and bathymetric surveying, geotechnical investigations, aerial photography, review of prior reports and historical information, a wave and water level assessment, and a morphological evaluation. The back beach and upper beach consist of a veneer of shell hash overlying marsh sediment (Figure 2); the shell is transported landward by waves during higher tides. The lower berm is predominantly exposed clays with some remnant plant material. The lower berm is typically much flatter than the upper and lower beach and forms a terrace (Figure 3). Waves cause a scarp to form along the seaward edge of the lower berm, undercutting the roots of the living or recently dead plants. Seaward of the scarp, the beach profile is almost completely void of sand and shell.



Figure 2. Shell hash along upper beach.

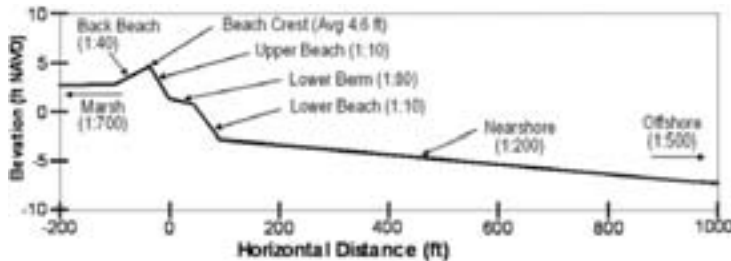


Figure 3. Beach features and average slopes.

The geotechnical investigation was performed by Fugro Consultants, Inc. (2002, 2003). Key results of the investigation are provided below.

- The subsurface conditions appear to be relatively uniform along-shore and across-shore. Between approximate elevations +5 feet and 0, the soil is a loose to medium-dense shell with shell fragments. Below this stratum to an approximate depth of 40 feet is a very-soft to soft under-consolidated clay that was reported by Fugro to have a consistency “similar to drilling mud.” Below the stratum of very-soft to soft clay to a depth of at least 100 feet is a stiff to very stiff clay. Figure 4 provides a generalized subsurface profile along the project shoreline from Joseph Harbor (B-20) to the western boundary of the Refuge (B-1).
- Grab sampling did not reveal any significant surface deposits of sand or shell across the submerged portion of the beach profile. The surface sediments appear to be relatively uniform in both the across-shore and alongshore directions, although there is an abrupt change across-shore at the waterline where the surface sediments change from shell particles to silt and clay.
- Due to the stratum of very soft to soft clay to a depth of approximately 40 feet, the allowable bearing pressure of the soil is low (less than 300 psf).
- Total settlement was expected to be in excess of one foot for all alternatives considered.
- Soil consolidation and settlement due to the bearing pressure of the shore protection structures will occur slowly. Only about 40 to 50 percent of the total settlement is expected over a period of about 8 to 12 years. The remaining settlement will likely occur over a period of 40 to 45 years.
- Instantaneous (construction) settlements associated with soil displacement and elastic compression of the soft clay are challenging to predict and will be highly dependent upon the place-

ment techniques employed by the construction contractor. Through effective application of geotextiles and depending on the placement methods, instantaneous settlements were predicted to range from 6 to 24 inches.

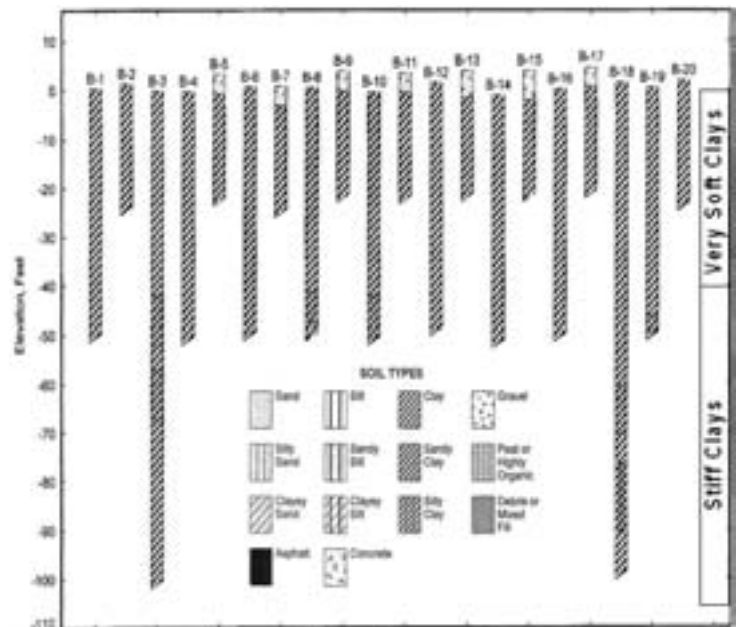


Figure 4. Generalized subsurface profile (Fugro 2003).

Final Design

Over 80 alternatives and variations thereof were considered. The initial screening of these alternatives reduced the number of possible alternatives to 14. Design, cost, and construction considerations for these 14 alternatives were then evaluated in more detail. Most of the alternatives were eliminated based on cost and/or the bearing pressure being too great for the soil. After final screening, only two alternatives, a reef breakwater with lightweight aggregate (LWA) core and a concrete panel breakwater, were recommended for further consideration. Because of the unique site conditions, innovative nature of the proposed alternatives, and lack of definitive design methodology, test sections were proposed for further evaluation.

Subsequent to submittal of the final Feasibility Study report and decision to implement test sections, modified design criteria were considered to allow evaluation of additional alternatives. Under the modified design criteria, a hypothetical increase of the construction budget by 50% (i.e., from \$38,000,000 to \$57,000,000) and relaxation of the “no erosion under a Category 1 hurricane” requirement were considered. Following this additional screening, a third approach consisting of soil pre-loading for later construction of a breakwater or revetment was selected for further analysis.

During a meeting with OCPR in (2003), two more alternatives that were previously eliminated during the Feasibility Study based on cost were selected: a reef breakwater combined with beach nourishment, and gravel/crushed stone beach nourishment. The soil pre-loading was subsequently not recommended for inclusion in the demonstration project due to uncertainties in the design as well as high costs associated with the revetment, or similar structure, in addition to the soil pre-loading. The total number of approaches

for further evaluation was brought to four, as listed below (Shiner Moseley 2006).

- (1) Beach fill with gravel/crushed stone (Figure 5)
- (2) Reef breakwater with sand or gravel/crushed stone beach fill (Figure 6)
- (3) Reef breakwater with LWA core (Figure 7)
- (4) Concrete panel breakwater (Figures 8 and 9)

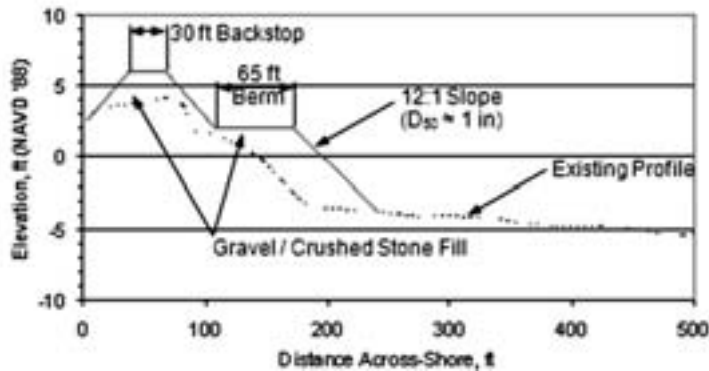


Figure 5. Typical section of Beach Fill concept.

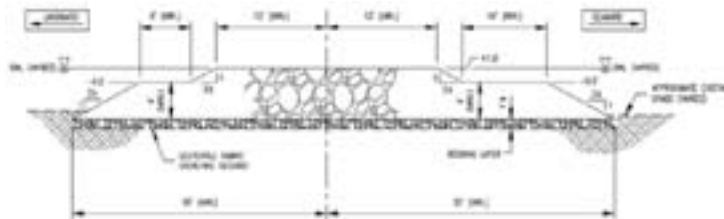


Figure 6. Typical section of Reef Breakwater concept.

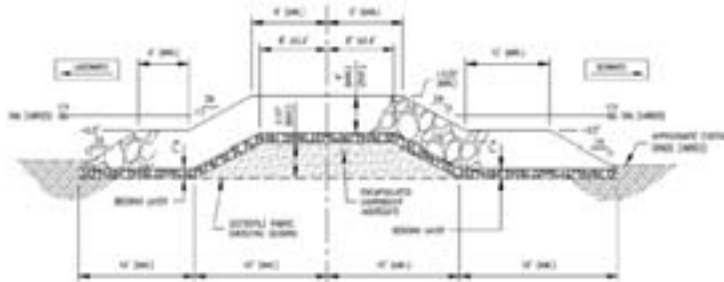


Figure 7. Typical section of Reef Breakwater with LWA core concept.

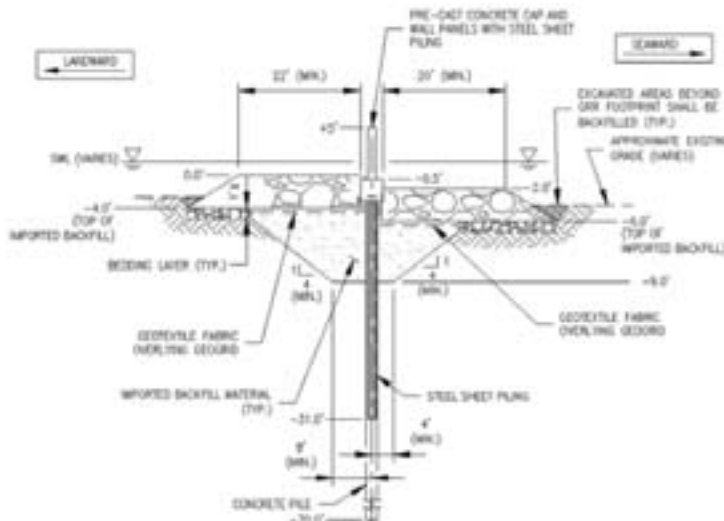


Figure 8. Typical section of Concrete Panel Breakwater concept.

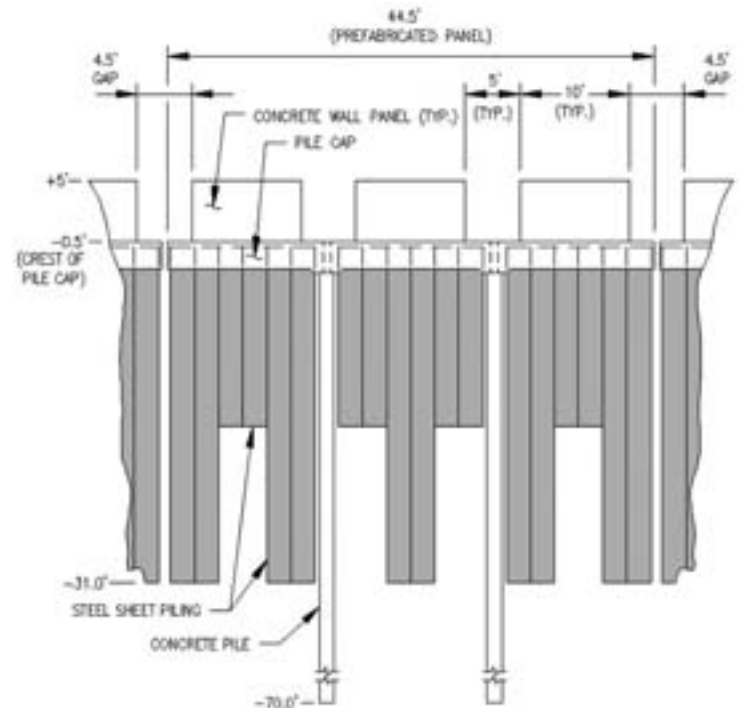


Figure 9. Typical elevation of Concrete Panel Breakwater concept.

Construction Progress

The demonstration portion of the project was bid for construction in early 2009 and a contract of \$9,353,000 was awarded to Choctaw Transportation Company. The bid includes an allowance for additional materials if needed due to excessive settling. The project was bid with the four alternatives (Reef Breakwater, Reef Breakwater with LWA Core, Beach Fill, and Concrete Panel); however, the Concrete Panel option was not awarded due to budget limitations. Construction is currently in progress and is scheduled to be complete by the end of October 2009.

As of September 2009, the Reef Breakwater (Figure 10) and Beach Fill (Figures 11 and 12) sections have been constructed. Preliminary data from settlement plates placed within the Reef Breakwater show an average construction settlement of approximately 6 inches, well under the estimated 24 inches. Overall, construction of the Reef Breakwater was relatively straightforward without any major construction issues or problems. This alternative appears to be best in terms of constructability, mainly due to the conventional design and materials and location offshore.

During construction of the Beach Fill, the extremely soft soils prevented efficient operation of land-based equipment across the lower berm. Because the Reef Breakwater was constructed before the Beach Fill, placement of Beach Fill landward of the breakwater with barge-mounted equipment was not feasible. Therefore, it was decided to omit the portion of the Beach Fill landward of the Reef Breakwater. This decision was based on the construction settlements for the Reef Breakwater being much less than anticipated, meaning that the redundancy offered by the Beach Fill was likely not required. Without the Beach Fill, the Reef Breakwater would become much more viable in terms of cost.



Figure 10. Placing graded riprap along Reef Breakwater.

To the west of the Reef Breakwater, the stand-alone Beach Fill was constructed as planned, although the template was shifted slightly seaward to accommodate placement from barges and avoid the need for equipment to operate directly on land. Although construction settlements for the Beach Fill were slightly higher than for the Reef Breakwater, with an average construction settlement of approximately 11 inches, they were still less than expected. Even though the overall average settlement was less than one foot, isolated areas of greater settlement of up to 3 feet were observed. Since the Beach Fill will function similar to a dynamic revetment, meaning its cross-section adjusts to daily and seasonal waves, surveys of work in progress were needed to document in-place volumes on a daily basis.



Figure 11. Placing gravel as Beach Fill.



Figure 12. Partially constructed Beach Fill.

Construction of the Reef Breakwater with LWA Core is scheduled to begin during late September 2009. Bags fabricated from high-strength geotextiles have been filled with the LWA material (Figure 13) and are in transit to the project site. The individual bags filled with LWA material weigh approximately two tons, although the material itself is essentially neutrally buoyant. Timing and methods of placing the LWA filled bags and subsequent cover stone will be critical to ensure a relatively uniform placement.



Figure 13. Geotextile bags being lowered into place.

Construction Challenges

Constructing shore protection along the project shoreline requires overcoming many challenges due to the relatively soft soils at the site, exposure to waves from the open Gulf, and access limitations. The soft soils preclude use of conventional construction equipment, as shown in Figure 14. This in turn requires the work to be performed from a barge or employing other less-conventional construction methods. The soft soils also present challenges in measuring pay quantities because the settlement is non-uniform across the site, requiring liberal placement of settlement plates.

The equipment and barges capable of working within the shallow water nearshore are also constrained to working during relatively mild wave conditions. Although working in the summer months is preferred for the generally calmer conditions, eventual construction of the full 9.2 mile project will likely last longer than the few months of summer.



Figure 14. Track hoe on timber mats partially submerged in soft soils.

Because of the remoteness of the project site, access is limited and material barges must sail from either the Mermentau River (16 miles from the west) or Freshwater Bayou (28 miles from the east). The long hauls through the open Gulf make transport of materials to the site unreliable during inclement weather and/or rough seas. These challenges, along with the challenges presented in the construction of each individual alternative, make protecting the vulnerable Rockefeller Refuge coastline a difficult task and will all play an important role in deciding which alternative is the best solution for the full 9.2 mile project.

Future Work

Upon completion of the demonstration project, monitoring of the performance of each alternative will be conducted for one year to provide guidance in selecting the best alternative for the full 9.2 mile project. Monitoring will include topographic/bathymetric surveys, aerial and ground photography, and collection of wave and tide data. Topographic/bathymetric surveys will include surveys of the constructed test sections as well as the cross-shore profile of the beach at each section. A control area located west of the demonstration site will also be surveyed to compare the alternatives to a no action alternative. Settlement plates will be surveyed to record the settlement of each alternative over the one-year monitoring period.

Aerial photography will be collected along the western boundary of Rockefeller Refuge from just east of Joseph Harbor to the west of the demonstration project site. Aerial photography will provide a view of the effectiveness of the different alternatives and a comparison of the shoreline changes beyond the control section. Although less accurate than surveys, the aerial photography will provide a larger-scale evaluation of the test sections. Ground-level photography will supplement the aerial photography and surveys to provide cost effective documentation of small-scale features that may be missed in the surveys or aerial photos.

Wave and tide data will be collected and applied to evaluate and compare wave transmission at each alternative. This information can also be applied for subsequent calibration of a numerical wave model for detailed final design of the full 9.2 mile project. In combination with the beach profile survey data, the wave data can be applied to determine and compare erosion thresholds at test and control areas.

Analysis of the field data throughout the monitoring phase will be used to help evaluate the effectiveness and functionality of each alternative. The information provided from this analysis along with

cost data from the demonstration project and constructability concerns encountered during construction of the alternatives will be used to recommend a single alternative for design of the full 9.2 mile shoreline protection.

Acknowledgements

The authors thank Maury Chatellier, Kenneth Bahlinger, Darrell Pontiff, and other OCPR staff for their guidance and support on this project. In addition, we appreciate the significant contributions of Dr. John Foret at NMFS, Guthrie Perry at the Louisiana Department of Wildlife and Fisheries, and Neil McLellan at HDR Engineering. We also thank Danny Darnell at Choctaw Transportation Company for the hard work that has been put forth during project construction.

References

- Byrnes, M.R., McBride, R.A., Tao, Q., and Duvic, L. 1995. *Historical Shoreline Dynamics Along the Chenier Plain of Southwestern Louisiana*. *Gulf Coast Assoc. of Geol. Soc. Trans.*, Vol. 95, pp. 113 – 122.
- Fugro Consultants LP. 2002. *Geotechnical Study (Part I of II), Gulf Shoreline Stabilization Project, Rockefeller Refuge, Cameron Parish, Louisiana*. Report No. 0602-1316, Houston, Texas.
- Fugro Consultants LP. 2003. *Geotechnical Study (Part II of II), Gulf Shoreline Stabilization Project, Rockefeller Refuge, Cameron Parish, Louisiana*. Report No. 0602-1316, Houston, Texas.
- Louisiana Department of Wildlife and Fisheries. 2005. <http://www.wlf.louisiana.gov/experience/wmas/refuges/rockefeller.cfm>
- Shiner Moseley and Associates, Inc. 2003. *Rockefeller Refuge Gulf Shoreline Stabilization (ME-18), Feasibility Study (20% Complete Design)*. J200.10108.01, Corpus Christi, Texas.
- Shiner Moseley and Associates, Inc. 2006. *Rockefeller Refuge Gulf Shoreline Stabilization (ME-18), Final Design Report*. J200.10108.04, Corpus Christi, Texas.

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Daniel J. Heilman, PE, is the Coastal Technical Manager for HDR Engineering, Inc. in Corpus Christi, Texas. Mr. Heilman is a graduate of Texas A&M University, having received a B.S. in Maritime Systems Engineering in 1993 and M.S. in Ocean Engineering in 1995. He has over 13 years experience designing coastal engineering projects including marine ecosystem restoration, beach nourishment, shoreline protection, and dredging. His responsibilities include project planning, technical analyses and design, preparation of construction plans and specifications, construction administration/observation, and monitoring.

2009-2010 ASCE Louisiana Section Installation Luncheon

On September 18, 2009, the Louisiana Section held its annual Section Officers and Board of Directors Installation Luncheon and Section Awards presentation at Juban's Restaurant in Baton Rouge. Hosted by the Baton Rouge Branch, the event drew close to 80 invitees, guests and Section members. This is the second year that the luncheon was hosted by the home branch of the incoming Section President, and by all accounts, the luncheon was a tremendous success. Baton Rouge Branch President, Billy Wall, called the meeting to order at 12:00 pm, provided opening remarks and thanked his fellow board members for all of their help during the previous administrative year. Section Secretary-Treasurer, Ronnie Schumann, led the invocation which was followed by welcoming remarks from Section President Ali Mustapha. President Mustapha cited the



President Ali Mustapha's opening remarks

many accomplishments during the past year and thanked the Section Board for their hard work and support. He specifically discussed three areas of success during the 2008-2009 administrative year. First, with last year's retirement of long time Journal editor, Mr. Jim Porter, the Board was faced with the daunting task of continuing the award-winning tradition of excellence that the Journal has provided for the last sixteen (16) years. The Board decided to hire Ms. Nedra Davis as editor who worked with Journal Publication Chairman, Christopher Knotts, to provide the leadership needed. With their guidance, the Journal saw a few formatting changes but, most importantly, continued to provide the Section membership with excellent technical articles along with important news about the Section, branches and student chapters. The Journal received national awards in both 2006 and 2008 and is once again nominated for a national award in 2009.



Journal Chairman Christopher P. Knotts, Editor Nedra Davis, and Section President Ali Mustapha

The second area of accomplishment cited by President Mustapha was the updating and enhancement of our website, www.lasce.org, by Website Chairman, Patrick Landry. Many new features have been added to the website, and like the journal, the website has been nominated for a national award. Finally, President Mustapha recognized Dr. Om Dixit for his work in establishing the Louisiana Chapter of the Transportation and Development Institute (TD&I). The chapter is one of only three chapters in the nation. It is active in providing seminars to our membership pertaining to the transportation and planning field.

At the conclusion of his remarks, President Mustapha called upon Dr. Norma Jean Mattei, a past Section President and currently the Director of Region 5, to update the luncheon attendees on the latest news regarding the ASCE region which is comprised of Louisiana, Mississippi, Alabama, Georgia and Florida. The Region 5 Board reports directly to the ASCE National Board of Directors.

After Dr. Mattei's comments, an excellent lunch was served by Juban's staff. After lunch, the meeting resumed with the presentation of the annual Section Awards. Section Awards Committee Chairman, Patrick Landry, presided over the award ceremony. A total of eleven (11) Section Awards were presented. Those receiving awards were:



Patrick Landry presents awards

Roger Seals, PhD, PE
Jeffrey L. Duplantis, PE
Joshua P. Stutes, PE
Paul B. Fossier, Jr., PE
Dax A. Douet, PE
Charles Eustis, PE
Kam Movassaghi, PhD, PE
Robert Boh, PE

Educator of the Year
Outreach Award
Outstanding Young Government Civil Engineer
Outstanding Government Civil Engineer
Outstanding Young Civil Engineer
Outstanding Civil Engineer
Lifetime Achievement Award
Wall of Fame



Charlie Eustis presides over Installation Ceremony

Gerald Dubroc, PE Wall of Fame
 E.J. French, Sr., PE Wall of Fame
 Gordon Boutwell, PhD, PE Wall of Fame

At the conclusion of the Section Awards presentation, President Mustapha returned to the podium to present the President's Award to Dr. Om Dixit.

Mr. Charlie Eustis was called upon to install the incoming Section Officers and Board of Directors for the Louisiana Section and the Baton Rouge Branch officers for the 2009-2010 administrative year.

The 2009-2010 Section Officers are:

Christopher P. Knotts, PE President
Patrick J. Landry, PE President-Elect
Ronald L. Schumann, Jr., PE Vice-President
Kurt M. Nixon, PE Secretary-Treasurer
Ali M. Mustapha, PE Past President

The Board of Directors are:
Dax A. Douet, PE, R. J. (Joey) Coco, PE, C. Eric Hudson, PE, Christopher G. Humphreys, PE, Joshua P. Stutes, PE, Jeffrey L. Duplantis, PE, J. Daniel Thompson, EI, Benjamin M. Cody, PE, Christopher L. Sanchez, PE, and Luke E. LeBas, PE.

The meeting concluded with outgoing President Mustapha presenting President Christopher Knotts with his President's Plaque followed by closing remarks by President Knotts.



Outgoing President Mustapha presents President's Plaque to President Christopher Knotts

2009-2010 ASCE Louisiana Section Officers



Christopher P. Knotts, PE
President



Patrick J. Landry, PE
President-Elect



Ronald L. Schumann, Jr., PE
Vice-President



Kurt M. Nixon, PE
Secretary-Treasurer



2009-10 ASCE Louisiana Section Leadership

Left to right top row: E.R. DesOrmeaux, PE, Christopher G. Humphreys, PE, Jeffrey L. Duplantis, PE, C. Eric Hudson, PE, Norma Jean Mattei, PhD, PE, Christopher L. Sanchez, PE, Dax A. Douet, PE, Joshua P. Stutes, PE.
Left to right bottom row: Kurt M. Nixon, PE, Ali M. Mustapha, PE, Christopher P. Knotts, PE, Patrick J. Landry, PE, Ronald L. Schumann, Jr., PE

2009-2010 ASCE Louisiana Section Board of Directors



Ali M. Mustapha, PE
Past President



Dax A. Douet, PE
Director-at-Large



R. J. (Joey) Coco, PE
Director-at-Large



C. Eric Hudson, PE
Director-at-Large



Christopher G. Humphreys, PE
Director-at-Large



Joshua P. Stutes, PE
Branch Director



Jeffrey L. Duplantis, PE
Branch Director



J. Daniel Thompson, EI
Branch Director



Benjamin M. Cody, PE
Branch Director



Christopher L. Sanchez, PE
Assigned Director



Luke E. LeBas, PE
Assigned Director

Section News

HIGHLIGHTS OF THE SEPTEMBER 18, 2009 BOARD MEETING

The Board met at Juban's Restaurant in Baton Rouge after the Section Officers and Board of Directors Installation Banquet. President Ali Mustapha welcomed everyone.

After approval of the agenda and minutes from the June 19th meeting, Secretary-Treasurer, Ronnie Schumann presented the Section's Financial Report as of September 15, 2009. He noted that our publication revenues were \$19,851, a substantial increase from our budgeted amount of \$15,000. This was due in large part to the efforts of Journal Chairman, Christopher Knotts, who was able to secure over thirty (30) new professional listings.

Mr. Schumann also reported that there is still a concern that we have a shortfall regarding our Section dues. A review of the financial records indicates that we had growth in Section dues from each of our branches except for the New Orleans branch which showed a decrease of over 300 members. It was concluded that there is an obvious error and Mr. Schumann is investigating the shortfall with ASCE National.

The balance in the checkbook as of September 15, 2009 was \$23,906.24 and the combined value of the four Certificates of Deposit was \$46,997.12.

Mr. Schumann presented the proposed budget for 2009-2010. A few minor changes were discussed and approved but no significant

changes were made for this administrative year. The proposed budget was approved by vote of the Board.

President Mustapha initiated discussion about establishing an ASCE Section Student Scholarship endowment. If each Branch matches the Section's \$5,000 donation to LEF, an endowment would be established by LEF in ASCE's name. He is requesting that each of the branches consider donating \$1,250 to LEF to establish the endowment.

Mr. E. Ray DesOrmeaux stated that ASCE National is encouraging each Section to produce a report card for their respective state. Several southern states are preparing a report card or at least a portion of one. He suggested that our Section consider this task and identify someone to lead this effort.

Dr. Om Dixit has offered to review our Section By-Laws and provide suggested changes to update the By-Laws. Mr. DesOrmeaux has completed his review of the Operating Guide and will email the revised guidelines to the branches for their use in updating their guidelines.

The Acadiana and Baton Rouge branches have completed their final SPAG reports. New Orleans needs to complete their final report and send to National.

President Mustapha adjourned the meeting at 2:50pm.

— Calendar of Events —

| | |
|-----------------------------|--|
| December 1, 2009 | Notification of SPAG award status |
| December 1, 2009 | Application deadline for Professional and Fundamentals of Engineering April 2010 exam (for First Time Applicants) |
| December 4, 2009 | Section Board Meeting; TJ Ribs in Baton Rouge; 10:00am |
| December 4, 2009 | Baton Rouge Branch Christmas Party; Bocage Country Club; Baton Rouge; 7:00pm |
| December 31, 2009 | ASCE dues for 2010 are due. Delinquent accounts will be purged in March |
| January 3, 2010 | Deadline for article submission for February issue of Louisiana Civil Engineer Journal |
| January 21, 2010 | New Orleans Transportation Management Center; Sponsored by ASCE T&DI Louisiana Chapter; Speaker to be determined; For more info, contact Miles Bingham @ (504) 837-6326 |
| January 28-29, 2010 | Annual Joint Engineers Society Conference; Holidome in Lafayette |
| February 12-13, 2010 | Multi-Region Leadership Conferences (Regions 1, 2, 4 & 5); Atlanta, GA |
| February 14-20, 2010 | Engineer's Week |

<http://www.lasce.org/calendar.aspx>

2009 Louisiana Section Awards

The 2009 Louisiana Section Awards were presented as a part of the Section Installation Banquet held on September 18, 2009 at Juban's Restaurant. The Section Awards program was started by the Louisiana Section in 1995 as a way to recognize the outstanding contributions of Louisiana civil engineers for service to their profession and ASCE.

Section Awards Chairman, Patrick Landry, presided over the awards program and thanked the branches for nominating an outstanding slate of candidates for consideration for each award. Twelve engineers, ranging in age from 31 to 79 years of age, representing every region in the state and with work experiences varying from consulting to construction to government to academia were honored during the ceremony. Each of these award recipients share a common bond – they are all dedicated to their civil engineering profession, ASCE, their communities and their families.

The highlight of the ceremony was the presentation of the 2009 Wall of Fame inductees. Each branch can select up to one nominee for inclusion to the Wall. It is the highest honor that can be bestowed upon a Louisiana Civil Engineer by the Louisiana Section. This years four inductees include: Mr. Gerald Dubroc, PE, nominated by the Acadiana Branch, Dr. Gordon Boutwell, PhD, PE, nominated by the Baton Rouge branch, Mr. Robert Boh, PE, nominated by the New Orleans Branch and Mr. E.J. French, Sr., PE, nominated by the Shreveport Branch.

Unfortunately, Dr. Boutwell and Mr. French have passed away within the last couple of years, but the Louisiana Section was honored to have several members of each of their families at the awards ceremony and their wives were in attendance to accept the Wall of Fame honor on their husband's behalf.

After Patrick Landry presented the first eleven Section Awards, Section President Ali Mustapha presented the final award of the ceremony, the President's Medal, to Dr. Om Dixit, PhD, PE for all of his efforts in establishing the Louisiana Chapter of the Transportation and Development Institute (TD & I). The Institute was the second institute established with ASCE National and one of only three nationwide currently. The TD & I provides transportation and planning seminars to civil engineers across the state.



Mary Boutwell



Shirley French



Gerald A. Dubroc, PE
Wall of Fame



Gordon Boutwell, PhD, PE
1938-2008
Wall of Fame



E.J. French, Sr., PE
1930-2007
Wall of Fame

2009 Louisiana Section Awards



Robert Boh, PE
Wall of Fame



Kam Movassaghi, PhD, PE
Lifetime Achievement Award



Charles L. Eustis, PE
Outstanding Civil Engineer



Dax A. Douet, PE
Outstanding Young Civil Engineer



Paul B. Fossier, Jr., PE
Outstanding Government Civil Engineer



Joshua P. Stutes, PE
Outstanding Young Government Civil Engineer



Jeffrey L. Duplantis, PE
Outreach Award



Roger Seals, PhD, PE
Educator of the Year



Om P. Dixit, PhD, PE
President's Award

Editorial: Integrity in the Face of Adversity

By Deborah Ducote Keller, PE

As Louisiana civil engineers, we know how Hurricane Katrina placed our profession at the center of disaster recovery controversy. As ASCE members, we are painfully aware of some individuals and organizations that questioned the integrity of ASCE. The ASCE External Review Panel, (ERP) was criticized by those with differing opinions, as well as those with different agendas, for its findings of what went wrong and why, and how the review was conducted.

In response, ASCE national president, David Mongan, tasked an independent group of ASCE members, the Task Committee on Engineering Review Procedures, to create a new manual to serve as a guide for future ASCE disaster assessment teams. The ASCE Post-Disaster Assessment Manual was approved in July 2009 and is available at: www.asce.org/inside/TCERP_Manual_Final.pdf.

Prior to the events of 2005, most ASCE LA members had little experience with major disasters. Four years later, I would venture to say that in some capacity, whether personally or professionally, many of us now possess some degree of technical knowledge and experience in disaster damage assessments.

Here are some highlights of the new manual that you should be aware of as an ASCE member, especially the purposes of these post-disaster assessments: **to evaluate the behavior of engineered facilities under extreme conditions and to learn from the behaviors observed.** The goal is simply to document lessons learned regarding the causes of failure, restoration efforts, restoration times, and success stories.

In determining whether to organize a team after a disaster, ASCE will consider whether the assessment advances the science of engineering and engineering education. There are eleven other criteria to be considered, as well. ASCE went to great lengths to ensure that assessment team members agree to be bound by the ASCE Code of Ethics and standards of ethical conduct and they will have to sign various acknowledgements and waivers. Financial interests and personal relationships require disclosure before appointment to a team.

Team members are not eligible for honoraria or compensation for serving, unless ASCE's executive committee makes an exception for special circumstances due to the extensive service or time commitment a disaster requires.

The manual formulates a communication policy for dealing with the media and public interaction. Public perception was a very

important issue that the ASCE assessment team faced after Hurricane Katrina

If participating on a disaster assessment team is something that interests you, then first read the manual, which clearly defines the policies and procedures to consider before volunteering.

Louisiana Section past-president, E. R. (Ray) Desormeaux, PE, F. ASCE, was a member of the Task Committee that prepared the manual and we owe them a debt of gratitude for their contribution to our professional organization.

I have been asked to publish the invocation I gave several years ago at an ASCE banquet, so here it is.

Bless the civil engineer, humble being and mere mortal who is tasked to take creation and make it hospitable. May we have the wisdom to know how to protect civilization from the wrath of nature, and to know when to leave the natural environment as it is. May we have the courage to be steadfast in our principles and judgment, always mindful of the code of ethics of our noble profession. May our minds be enlighten to new ideas and technology to ease our burdens here on earth; and let us forget not as to why we were called to this vocation.

Make Plans to Attend the 2010 Louisiana Section Spring Conference

April 15-16, 2010
at the Clarion Hotel
Shreveport, Louisiana

For more information, contact
Mr. Daniel Thompson at (318) 425-7452
or dthompson@afjmc.com

Engineering Your Way to Management

By Sidney E. Fuchs

As engineering professionals' progress through their careers, the dilemma to remain in the technical field or move into management often presents itself. Making the transition from individual contributor to management is more than just moving up the career ladder – it is a move that requires you to change ladders and learn an entirely new set of skills. Whether it is a position as a line or administrative supervisor, university department chair, or an executive leader, the leap can be very challenging and stressful, but can also be very rewarding if the move aligns with personal and professional goals.

Having moved from Aerospace Engineer to the management ranks myself some years ago, I have learned many lessons from my own experience as well as by watching colleagues as they tried to make that leap. This article addresses some of the challenges inherent in this move and offers some “real life” lessons about what can be done to minimize the hurdles. It also discusses some of the challenges for supervisors and other high-level managers when an individual contributor joins the management ranks.

Challenges and Strategies for New Managers

The following suggestions and strategies provide guidance for overcoming specific challenges that you may face as a former individual contributor – particularly if you have an engineering background – as you move into a management position. As you read, keep in mind that I am by no means suggesting that you should abandon your technical background as you move up. Quite the contrary: this special knowledge will be an asset for the rest of your career.

Lack of Individual Recognition

As an individual contributor, you were recognized for your accomplishments and achievements, and it was easy for you to measure your success, based on acknowledgment from your managers and peers. As a manager, you get recognition through your team. When your team succeeds, you succeed -- and when they fail, you fail. Most new managers wonder, “How will I know whether I’m doing the right things?” The answer always lies with your team. If they are performing and meeting objectives, then you’re on the right track.

As a manager, you will often have to defer your own needs and desires and not compete with their teams for recognition or visibility. It’s important to remember that building a high trust environment, forging relationships, and creating esprit de corps is an essential part of your job and the key to a high performing team.

This is not to say that new managers should never expect thanks or recognition from upper management. Nothing is more satisfying

than having your team achieve goals and be recognized for their hard work. At the same time, the high-level managers who promoted you should take advantage of opportunities to publicly acknowledge your achievements. They should also provide consistent and relevant

feedback whenever possible. As a new manager, you will naturally feel concerned about what you are doing and how much you are contributing, and you will be eager for advice on what you can do to be better. Clear and frequent communication and coaching can do much to reduce this anxiety. If your supervisor isn’t offering it, then don’t be afraid to ask for it.



Sidney E. Fuchs



Adopting a Top Down Perspective

In your previous assignment, you were mostly concerned with your world, how things affected you directly and indirectly, and what you could do to contribute. You had what is called a “bottom up” or “vertical” approach to work situations. Now, as a manager, you must take a broad, “top down” or “horizontal” approach to your work. You must see the big picture and how it relates to the goals and objectives of the entire organization.

I recall an electrical engineer who was promoted to branch chief for a group of five engineers designing satellite antennas. This individual was an expert satellite antenna designer, but he had a hard time letting go of the details that were important to his previous job and focusing instead on meeting project schedules, managing budgets, communicating with his teams, and keeping management informed. Unfortunately, he never really made the leap. After struggling for a time, he eventually retreated to his previous assignment as an engineer.

In this instance, good mentoring and communication might have made a critical difference. Instead, his own manager incorrectly assumed that since the branch chief was a top-notch engineer and worked well with his peers, he would instantly excel at this new position. In fact, the branch chief could never see beyond his own area of expertise to understand what was important to the business or upper management.

For engineers, developing a top down, horizontal perspective can be difficult. Engineers typically approach problems analytically, referring to empirical data and principles, and reaching definitive conclusions. While this is an excellent approach for a technical environment, it is not effective for problem solving in a management environment, which frequently requires taking into account ambiguous information as well as people's opinions, desires, fears and personalities.

Putting Aside Perfectionism

The old saying, "Perfect is the enemy of good enough" is an apt one for new managers to keep in mind. In contrast to analysts, who often have the luxury of putting off a decision until the nth hour and waiting for all the relevant information to be assembled, managers must be able to make timely decisions based on whatever information is currently available.

How do you develop the ability to make good "gut" decisions? It's called experience. Until you have gained enough experience to truly understand your thought processes and build confidence in your ability to make these decisions, you may feel uncomfortable with them. Remember that in general, you will learn more from failing than you will from succeeding, so you must put aside your perfectionist tendencies and not become discouraged if you sometimes make the wrong call.

Developing New Skills

As you move up the management ladder and assume more responsibility, you will need to acquire new skills and strengthen others to operate successfully at each level. What skills does a good manager need? In general, effective managers have the ability to:

- Feel comfortable managing situations and problems that are not always clearly defined;
- Communicate critical information clearly, succinctly, and in a timely way;
- Respond quickly and decisively to changing situations as well as to others' ideas and needs;
- Understand and appreciate the value and importance of people;
- Motivate others to work effectively, both as a team and individually;
- Listen to coworkers up and down the chain of command (a crucial skill to master);
- Get along with others and display good will and humor;
- Mentor junior staff members.

The responsibility for acquiring and developing these skills resides with both you and your supervisor. When you assume your new position, you should collaborate on a skills development plan with specific goals and timelines and then review it together periodically.

Trustworthiness, integrity and sound ethics are also key requirements for a successful manager and leader. Your people are now watching you. Everything you say, everything you do will be observed as they try to figure out what makes you tick. It doesn't matter how smart you are or how much experience you have, if your team thinks you lack any of these essential attributes, then it will be hard for you to gain their respect. And if you don't have their respect, then you have lost the ability to lead the team.



Three Simple Steps

I have found the following model to be effective in leading and managing organizations. Clearly, one has to modify the model based on people and the environment, but as a framework, this model has been very successful.

1. "Hire People Smarter Than You"

A mark of great managers and leaders is that they surround themselves with very capable people who can grow the organization, mentor others and take their teams to a higher level of success. Jack Welch, former CEO and Chairman of General Electric, claimed that managers must leverage the "brain power" of their entire company in order to develop effective business strategies and stay on top of the competition. The ability to identify and recruit talented people, keep them challenged and retain them is a primary qualification for successful managers.

For some people however, this piece of advice may be very difficult to follow. They may feel threatened by others who have skills or talents they lack. Also, in order to determine what skill sets they need in people they hire, managers must be able to assess their own skills and talents as well as those of their team members. Taking a hard look at your own strengths and weaknesses is not always fun, but it is almost always revealing. To be a successful manager, you must be able to do it without feeling threatened in the process. And as a new manager, with very understandable insecurities, you must overcome the need to "have all the answers" yourself.

2. "Tell Them What You Want"

This means you should communicate direction clearly and succinctly; it doesn't mean that you should be a dictator. As a manager, you must take the lead in establishing goals and monitoring performance, but you should also be sure that all team members help to define the goals and play a primary role in prioritizing their own activities. To take full advantage of the team's talents, you have to get everyone's buy-in. If you solicit input and allow everyone to feel a sense of ownership and responsibility, it can only improve the team's performance.

3. "Get Out of Their Way"

To be a good manager, you need to trust the people you supervise and not micromanage their activities. If you put smart and

energetic people in a supportive environment, they will figure out how to reach the goals you have set collaboratively, and will not need to be monitored every step of the way. This does not mean that your management must be strictly “hands off,” but it does mean that you should know when to step in and when to step back. If you give your team a little elbowroom, they’ll have the freedom to develop their own innovative solutions. Under these circumstances, their buy-in to these solutions will be almost certain, and they will be willing to do whatever it takes to execute them effectively.

Finding Your Stride

Every person you manage will present you with a different set of circumstances, opportunities, and challenges. It’s important to understand what motivates a person and then act accordingly. Truly effective managers engage with each team member in a manner unique to that individual. You do not need to develop a completely different style or tempo for each person, but you do need to understand that what works for some will not work for others. How you speak, respond and use body language will send an

important message to your team members, so always be cognizant of who they are as individuals and notice what approach works best when you try to engage them.

It is equally important to acknowledge that you’re not going to shine along every dimension of management. What really matters is how you leverage your strengths and compensate for your weaknesses as well as those of your team. Make careful, honest assessments on all fronts, and then bring in new team members with complementary skills who can resonate and thrive in the existing environment and culture.

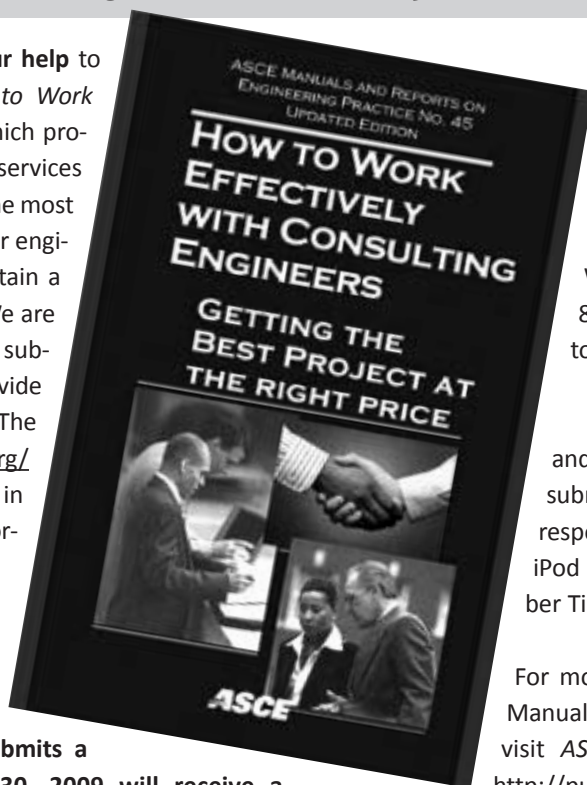
Above all, never assume that just because you excelled at your previous position that you will “naturally” do the same as a new manager. Just because you’ve reached the management level doesn’t mean the learning stops. On the contrary, you need to develop and refine an entirely new set of principles, tools and methods. Give yourself time and be patient as you grow and learn and evolve into your role.

Sid Fuchs is a leading executive with over 26 years of experience in the public sector and commercial markets, with an emphasis on intelligence, security, defense and information systems. He is the president and CEO of OAO Technology Solutions, Inc. (OAOT), a privately held global Information Technology company that supports commercial and government customers. Mr. Fuchs is a former Central Intelligence Agency officer and a corporate officer of Northrop Grumman. He is the Chairman of the Tower Club Board of Governors and in 2008, was appointed to the Defense Science board as a member of the Permanent Task Force on Intelligence. Mr. Fuchs is a published author and speaker on topics such as leadership development, building high performance organizations and strategy development.

Your Help is Needed for Manual 45! ASCE Consulting Engineering Practice Survey 2008 - 2009

This is a reminder that ASCE needs your help to finish improving Manual No. 45, *How to Work Effectively With Consulting Engineers*, which provides guidance on procuring engineering services for a quality project. In order to provide the most accurate information on compensation for engineering services, it is critical that we obtain a broad response of actual project data. We are asking principals and project managers to submit one survey per office, but to provide information on several of your projects. The survey is available at <http://www.asce.org/m45>. Please share this link with others in your office who may need to provide information to complete this survey.

The survey is completely confidential and only ASCE staff will have access to individual survey responses and contact information. **Each respondent who submits a completed survey before November 30, 2009 will receive a**



\$10 discount on the purchase of any ASCE publication.

If you have any questions or would like information on an alternate method to submit the survey, you may call Becky Waldrup, Manager, Professional Practice at 800-548-2723, ext. 6281 or send an e-mail to rwaldrup@asce.org.

Thank you for your help,

and thank you to all of you who have already submitted your completed surveys. Previous respondents were entered into a drawing for an iPod Nano, which was awarded to ASCE member Timothy Granata.

For more information on the current edition of Manual 45 and other ASCE Manuals of Practice visit *ASCE Publications - Manuals of Practice*: <http://pubs.asce.org/books/manuals/>.

Branch News

ACADIANA BRANCH

By Joshua P. Stutes, MS, PE, Branch President

The Board of Directors has identified and set forth a few goals for the Branch to accomplish during the 2009-10 administrative year. They are to

- Provide and host a Fall Technical Seminar worth 8 PDH's for our members on October 22nd, 2009.
- Participate in the annual Joint Engineering Societies Conference (JESC) scheduled to be held in Lafayette January 28th - 29th, 2010.
- Provide high quality continuing education via the technical topics presented during the monthly Branch membership meetings, and as a result, boost our meeting's attendance!
- Become more involved in our Student Chapters at UL Lafayette & McNeese State University and aid in their participation efforts in the upcoming Deep South Student Conference.

On October 22nd, the Branch hosted a Fall Technical Seminar in Lafayette, LA. The seminar was a comprehensive one-day event worth eight PDH's that focused on several areas of Civil Engineering including: Pre-stressed Concrete Design and Analysis, Coastal Restoration, Deep/Shallow Foundation Design, Post Tension Slab-on-Grade design, and Site Investigation Techniques. The branch secured three experts in the aforementioned Civil Engineering areas who are well-recognized nation-wide in their professional, academic, and scholarly activities. In months to follow for the JESC, the Branch plans to provide speakers for approximately four to eight technical session topics on civil engineering, exhibitors, and sponsors. Information about the Conference will be publicized by the Branch in the near future.

The Branch began its 2009-10 Administrative year with the August Branch membership meeting that included the Board of Directors installation ceremony. On behalf of the Board, I would also like to thank E. Ray DesOrmeaux, PE, LA ASCE Section Past President, for performing the installation ceremony as well as the awards presentation. The members of the Board for the 2009-10 Administrative year are:

- **Joshua P. Stutes, MS, PE** – President
- **Shaun R. Simon, MS, PE** – President-Elect
- **Luke Hebert, PE** – Vice President
- **Randel Badeaux, Jr., PE** – Treasurer

- **Robert "Will" Potier, PE** – Secretary
- **Clint S. McDowell, PE** – Past President

The Board welcomes its newest officer and Secretary, Robert "Will" Potier, and we have already put him to hard work! Furthermore, I would like to congratulate the 2009 ASCE - Acadiana Branch Award Recipients:

- Outstanding Young Civil Engineer – **Dax Douet, PE**
- Outstanding Young Government Civil Engineer – **Joshua P. Stutes, MS, PE**
- Wall of Fame Award – **Gerald Dubroc, PE**
- Lifetime Achievement Award – **Kam Movassaghi, PhD, PE**
- Outreach Award – **E. Ray Desormeaux, PE**
- Educator of the Year – **Ken McManis, PhD, PE**

The September Branch membership meeting featured Mr. Tony Tramel, City of Lafayette Public Works Traffic Engineer (LCG), who gave a very impressive presentation on innovative intersection improvements and design aspects inclusive of Roundabouts as well as Continuous Flow Intersections (CFI). In November, we look forward to having Mr. Bill Gwyn of Eustis Engineering coming speak to our membership on the IHNC Floodwall Project. We currently have a working schedule of our proposed meeting dates/locations/topics/speakers on our website at www.asceacadiana.net.

On behalf of the Board, I would like to acknowledge the following individuals who agreed to volunteer their time as student chapter contact members for the 2009-10 Administrative year:

- **Jasmine Dufreche, MS, EI**, Student Chapter Contact Member, University of Louisiana at Lafayette
- **Janardanan O. Uppot, PhD, PE**, Student Chapter Contact Member, McNeese State University

The Board attended the first meeting of the school year for the University of Louisiana at Lafayette ASCE Student Chapter with a BBQ at Girard Park on September 1st. We were pleasantly surprised with the attendance that included well over 50 students & alumni as well as most of the professors in civil engineering, including the

ACADIANA BRANCH *continued*

Civil Engineering department's new Structural professor, Chris Carroll, PhD, PE. The entire UL Lafayette student chapter board and sponsors such as E. Ray DesOrmeaux should be commended for conducting such a well-organized and attended event. Our new board has already met with the UL Lafayette student chapter to discuss their proposed budget for the upcoming year, and we look forward to helping them in any way we can in achieving their goals. We have also received a monetary budget from the McNeese State student chapter and hope to meet with their new board in a similar manner. Finally, we look forward to awarding well-deserving Junior & Senior students from both Universities, our ASCE Acadiana Branch Academic Scholastic Award & Scholarship. We had a tough time choosing just one junior and senior from both universities this past spring and expect another bout of difficult decisions coming soon. Keep up the great job!

BATON ROUGE BRANCH

By William H. Wall, PE, Branch President

The August luncheon was at Drusilla Seafood Restaurant on August 20, 2009. The speaker was Louisiana Department of Transportation and Development Secretary Dr. William Ankner. He gave us an update of future funding at DOTD. This was a joint luncheon with LES.

We set up a foundation account at LSU in the name of the Department of Civil and Environmental Engineering for the Coastal Engineering Program and donated \$20,000 to set up the account. This check was presented to Mr. Eisenberg, Dr. George Voyiadjis, and Ron Rodi at this luncheon. Please see the article featured later in this journal.

Our meeting sponsors were Sigma Consulting Group, Inc., Johnson Equipment Company, and Cardno TBE.



Left to Right top row: Samuel D. Amoroso, PE, William H. Wall, PE, Rudolph A. Simoneaux, III, PE, Danielle R. Welborn, PE, and Clinton S. Willson, PhD, PE

Left to Right bottom row: Adam M. Smith, PE, Jeffrey L. Duplantis, PE, R. J. (Joey) Coco, Jr., PE.



Left to Right: Randel Badeaux, Jr., PE, Luke Hebert, PE, Joshua P. Stutes, MS, PE, and Shaun R. Simon, MS, PE (Not pictured Robert "Will" Potier, PE and Clint S. McDowell, PE)

The September luncheon was at Juban's Restaurant on September 18, 2009. This was a joint luncheon with the ASCE Louisiana Section. The luncheon acknowledged the 2009 Section Award Winners and installed the Louisiana Section and Baton Rouge Branch Officers for 2009-2010. Our meeting sponsors were SJB Group, LLC and Coastal Engineering Consultants Inc. The new Baton Rouge Branch Board.



Jeffrey L. Duplantis, PE gives William (Billy) H. Wall, PE the Baton Rouge Branch President's Plaque.

Members are as follows:

Jeffrey L. Duplantis, PE – President

Adam M. Smith, PE – President-Elect

Clinton S. Willson, PhD, PE – Vice President

Rudolph A. Simoneaux, III, PE – Secretary/Treasurer

Samuel D. Amoroso, PE – Director of Education & LSU Practitioner Advisor

R. J. (Joey) Coco, Jr., PE – Director of Programs

Danielle R. Welborn, PE – Younger Member Committee Chair

Alison Ford, PE – SU Practitioner Advisor

William H. Wall, PE – Past President

NEW ORLEANS BRANCH

By Benjamin Cody, PE, Branch President

The ASCE New Orleans Branch had a great year with some great luncheon speakers which boosted attendance. The board has been very active this past year serving the membership and I would like to thank everyone that helped out.

The SEI New Orleans Chapter held a meeting on August 5th at UNO on Transforming the Project Delivery Process Using Building Information Modeling (BIM). James Jacobi of Walter P. Moore and Associates, Inc. from Houston spoke at the well attended meeting.

The younger members held a meeting September 16th at Phillips in New Orleans. The meeting was well attended.

Board of Directors

The Branch Board of Directors for the 2009-2010 administrative year was installed at the September 9th meeting held at Ralph's on the Park. The new Board members are:

Ben M. Cody, PE – President

Meg S. Adams, PE – President-Elect

Malay Ghose Hajra, PhD, PE – Vice President

James R. Martin, Jr., PhD, PE – Treasurer

Stephen Johns, PE – Secretary

Reid L. Dennis, PE – Director, At-Large

Lee Alexander – Director, At-Large

Nathan J. Junius, PE, PLS – Director, Past President

Awards

The Board approved the recipients of the Branch outstanding member awards recognizing the exceptional achievements of these civil engineers in the Branch community. They are:

- Outreach - William H. Sewell, Jr., PE
- Outstanding Young Civil Engineer - James R. Martin, PhD, PE
- Outstanding Government Civil Engineer - Reid L. Dennis, PE
- Outstanding Civil Engineer - Frank C. McCaskell, PE
- Lifetime Achievement - Om P. Dixit, PE
- Wall of Fame - Robert H. Boh
- President's Medal – Darla Morales

These Branch awards were presented and the recipients honored during the September Branch membership meeting and luncheon that was held at Ralph's on the Park.

Life Members

Also during the September Branch membership meeting, the following Branch members having recently achieved ASCE Life Member status were recognized and they were presented with their Life Member certificates to commemorate the event:

- Donald Joseph Pertuit, PE
- Thomas L Stremlau, PE
- James Legendre
- Gerald A Bragg
- Silas Cunningham, PE

The Louisiana Civil Engineering Conference and Show (LCEC&S) was held again this year on September 23th and 24th at the Pontchartrain Center in Kenner. This is an annual event jointly produced by the New Orleans Branch and the Louisiana chapter of the American Concrete Institute. This year's conference was a great success with attendees and an increase in the number of exhibitors this year. This event provides a great opportunity for engineers to come together to exchange information and ideas and obtain PDH credits. Retired General, Russel L. Honoré was the keynote speaker at the luncheon on Wednesday and recounted many of his great stories and lessons learned while serving in the U.S. Army. I would also like to thank Frank McCaskell for his many years of help and hard work to make with the Louisiana Civil Engineering Conference and Show run smoothly. Frank is stepping down this year from the Board and will be hard to replace.



Outgoing President Nathan Junius and incoming President Ben Cody.

As always the board is interested in hearing from our members and encourages your input. You can always contact me at with any questions, comments or ideas how we can better serve our members.



Left to Right: Nathan J. Junius, James R. Martin, Malay Ghose Hajra, Meg S. Adams, Ben M. Cody, Reid L. Dennis, Lee Alexander

SHREVEPORT BRANCH

By Daniel Thompson, EI, Branch President

The Shreveport Branch 2009-2010 year is off to a great start! Our first meeting of the year was held on September 17th at the University Club in Shreveport. We were fortunate to have Steve Ard and Ben Humphries with Delta Process at our meeting to present a technical presentation on "Water & Sewer Pumps: Going Green". This presentation was well presented and we feel it proved beneficial to our members.

In addition to the presentation, we held our officer installation. Past-Section President and Shreveport Branch member, Ali Mustapha installed our incoming officers for this year. Matt Redmon will be our Vice-President and Patrick Furlong will be our Secretary-Treasurer. We currently have a vacant position of President-Elect that we anticipate will be filled soon.

We have several events coming up in our Branch. Our annual younger member food drive will kick-off very soon to prepare for the upcoming holiday season. These donations will be given to the Providence House in Shreveport to support the needs in our community.

As most of you are aware, the Spring Conference will be held this year in Shreveport. The date of this event will be April 15th & 16th

2010 at the Clarion Hotel in Shreveport. We are currently searching for speakers, vendors, and exhibitors for this event. If you are interested in speaking or having an exhibit, please contact me at (318)-425-7452 or by e-mail at dthompson@afjmc.com. Look for further information in the upcoming months to be posted on our website. We hope you make plans to attend this event in support of our Branch and to visit the Shreveport-Bossier area.



Patrick Furlong, EI, Matt Redmon, EI, Daniel Thompson, EI, and Todd Henry, PE

Advertising Rates per Issue for *The Louisiana Civil Engineer*

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Student Chapter News

ULL STUDENT CHAPTER

by Alison Lognion, Student Chapter Vice President

The UL ASCE Student Chapter officially started the new 2009-2010 school year with its annual "Welcome Back BBQ" on September 1st. There was a great turn out of students, faculty, alumni, and ASCE Acadiana Branch members. All were tapping their feet to the Cajun music provided by the Huval Family Band. The chapter would like to thank E.R. DesOrmeaux, Inc. for sponsoring the BBQ and all those who attended the event.

Other than commencing the new year with a successful event, the chapter is organizing a day field trip to New Orleans to observe the new structures being constructed by the U.S. Army Corps of Engineers. Plans to attend the Spring 2010 Deep South Conference in New Orleans, as well as compete in the Steel Bridge competition, are already underway. The chapter hopes to make this year a great success and looks forward to working

with the students, faculty, and surrounding partners in the Acadiana Branch.

NEW OFFICERS FOR 2009-2010:

Callen Huval, President
Alison Lognion, Vice President
Corey Meaux, Events Coordinator
Heath Michel, Treasurer
Garrett Noel, Parliamentarian
Mallory Comeaux, Secretary



UL ASCE Student Chapter "Welcome Back BBQ."



Pictured from Left to Right: Garrett Noel (Parliamentarian), Alison Lognion (Vice President), Callen Huval (President), Heath Michel (Treasurer), Corey Meaux (Events Coordinator)
Not Pictured: Mallory Comeaux (Secretary).

UNO STUDENT CHAPTER

by Jesse Adams, Student Chapter President

UNO ASCE OFFICERS/FACULTY:

President: **Jesse Adams**
Vice President : **Jeremy Pagoada**
Secretary: **Relinda Julien**
Treasurer: **Amy Robards**
Faculty Advisor: **Gianna Cothren**

STATUS:

Our UNO ASCE student chapter is currently

preparing to host this upcoming Spring's Deep South Regional Conference. We are working collaboratively to raise enough money to have a significant conference.

So far, we plan to hold Concrete Canoe competitions on Friday March 26, 2010 and Mead Paper and Steel Bridge competitions on Saturday March 27, 2010. We are also

working on getting a Crawfish Boil Social together that Friday following the Canoe competitions to kick off the conference.

Meagan Williams will be taking charge of our Concrete Canoe Project this year and Raymond Meladine will be our new Steel Bridge Captain.



LSU student chapter volunteered Habitat for Humanity on September 26.



The Role of Civil Engineers in Reducing Roadway Departure Crashes in Louisiana

By Dean Tekell, PE, PTOE

The Problem

Roadway departure crashes are a serious traffic safety concern on the national level. It is estimated that every 21 minutes a highway death occurs from a roadway departure crash. Statistically, Louisiana is once again among the nations leaders in a negative index. In 2008, 912 people died on Louisiana roadways. Lane departure crashes accounted for 538 fatalities or 59% of all deaths on Louisiana's roadways! In most years, there are fewer fatalities in aircraft crashes worldwide than lane departure crashes in Louisiana! As civil engineers in Louisiana, we have it within our power to save lives and reduce fatalities on Louisiana's roadways. We can make our state a safer and better place to live by remaining mindful of roadway departure crashes as we design Louisiana roadways, maintain Louisiana roadways, and operate Louisiana roadways.

A roadway departure crash is defined by the Federal Highway Administration as a non-intersection crash which occurs after a vehicle crosses an edge line or a center line, or otherwise leaves the traveled way. If we as civil engineers are going to design, maintain and operate better roadways, we have to overcome certain biases or mindsets that make us less aggressive or less determined to drive reduce roadway departure crashes. My experience, when I meet with engineers to review accident statistics and develop countermeasures to improve the safety of a section of roadway, it is often stated that:

- The driver left the curve because they were drunk;
- The driver left the curve because they were driving way too fast;
- If the occupants had only been wearing seatbelts they would have survived;
- The crash involve some teenagers driving an old clunker with bald tires; or,
- The driver was on their cell phone texting a friend.

While most of those statements are often true, they are not necessarily helpful to the cause of minimizing roadway departure crashes. There are other agencies and professions tasked to address seat belt use, drunk driving, vehicle safety, aggressive driving and distracted driving. Civil engineers must stay focused on our task: safer roadways.

If we focus on our part of the safety equation, the roadway, we can feel proud of ourselves and our profession that we introduced a feature or features that:

- helped a tired or drowsy driver navigate the roadway safely;
- helped a teenager or inexperienced driver survive a youthful error; or,
- helped a person survive an incident where they were run off the road by a drunk driver.

Let's look at features we can consider as we design, maintain or operate a roadway that will help drive down the number or severity of lane departure crashes in Louisiana.

The Counter Measures

Design

AASHTO's *A Policy on Geometric Design for Streets and Highways* serves as an important reference text within the State of Louisiana. In fact, the text is referenced in Louisiana's *Revised Statutes*. As such there are certain

legal consequences if the text is not used for design. Without question, Louisiana engineers have been careful to follow the *Policy* as well as design standards developed by the Louisiana Department of Transportation and Development for various functional classes of roadways. However, in order to reduce roadway departure crashes, designers need to be aware of how certain design features affect the operation of the roadway. An example would be curves.

Rural two lane highways in Louisiana have a statutory speed limit of 55 MPH. Therefore, it is not unreasonable for a designer to design a curve for a 55 MPH design speed (for a highway fitting that particular functional class). Theoretically, upon the opening of the roadway, a 55 MPH design speed curve would not even require a curve warning sign. Practically, if the curve is the first curve a motorist experiences after a long tangent section, there is a heightened risk of a roadway departure crash. Operating speeds on the tangent section are often, unfortunately, higher than the 55 MPH speed limit. Designers need to be mindful of this behavior and either design the curve for a higher design speed in anticipation of the higher operating speeds or include a series of traffic control devices to warn motorist of the impending curve. DOTD's District Traffic Operations Engineers are excellent sources of information on the number, type and placement of warning devices that are appropriate for the designer to include within the plans and specifications.

Another problem that can at times be difficult to spot in design and plan review is the improper design of reverse curves with deflection angles of 5 degrees or less. AASHTO's *Policy* suggests that reverse curves with deflection angles of 5 degrees have a length of curve approximating 500 feet. As the deflection angle is decreased to less than 5 degrees the curve needs to be lengthened further still. If the designer uses a short curve length, the problem is difficult to detect on a plan sheet using a scale of 1" = 20' or smaller. However, once the short curve length is constructed, the reverse curve will appear as a kink in the roadway. Operationally, short lengths of curve increase the risk that vehicles will run off the edge of the roadway. On high speed curb and gutter sections there will be curb strikes in the area of kink that can lead to vehicle rollovers and other undesirable outcomes. A less common problem, but one for which all designers need to be alert, involves a series of reverse curves in



Dean Tekell, PE, PTOE

which the radius of one of the curves is significantly smaller than the other curves in the series. Vehicle operators will maneuver through the first few curves in the series and develop an expectancy that the remaining curves they encounter will be similar. Throw them a curve with a significantly shorter radius (say a 10 MPH operating differential) in that series and the risk of roadway departure will be higher for the shorter curve. If the constraints of your project require the shorter radius, then include a series of traffic control devices within the plans to warn the motorist that they are approaching a feature that is different from the features they have encountered previously.

Once a vehicle has left the roadway, the lives of those inside the vehicle are often dependent upon the slopes the designer has specified for the area beyond the shoulder. Please avoid the old 3:1 slopes. Vehicles are unlikely to recover once they encounter a slope that steep. Rollovers are still a real possibility on a 3:1 slope. Instead aim for slopes flatter than 4:1. Right of way constraints and features of terrain like bayous, swamps and marsh, common to Louisiana will at times limit your ability to design flat slopes into your project. Refer to AASHTO's *Roadside Design Guide* to develop countermeasures if steep roadside slopes will be a part of your design project. The importance of the roadside slopes cannot be underestimated. I can introduce you to close friends and family members that are alive today because the designer was careful to provide a gentle slope for errant vehicle operators.

Maintenance

Engineers responsible for roadway maintenance activities, especially overlays, have a huge opportunity to introduce systemic improvements to highways and local roadways to minimize roadway departure crashes. These include:

The Safety Edge

When a tire drops off a paved surface, sometimes just inches from the travel lane, a driver can have difficulty re-entering the roadway if the pavement edge is nearly vertical—especially if the height difference is significantly more than 2 inches.

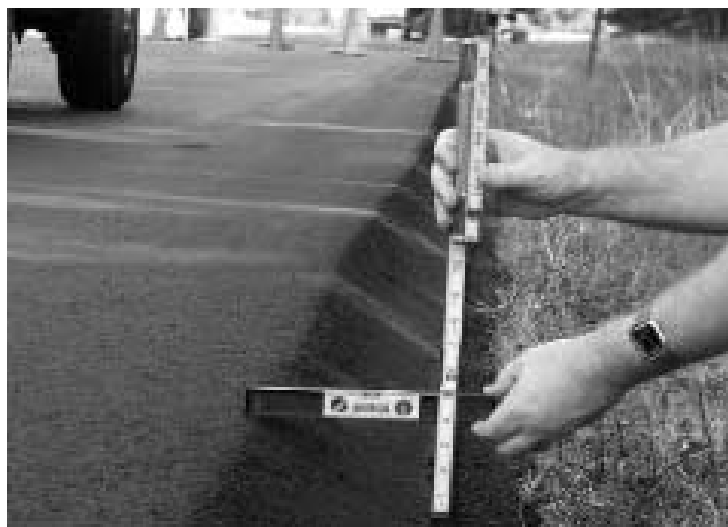


Sharp, steep pavement edge drop-offs can contribute to crashes.

When a driver drifts onto the roadway shoulder and tries to steer back onto the pavement, the vertical pavement edge can create a “tire scrubbing” condition that may result in over-steering. If drivers

over-steer to return to the roadway without reducing speed, they are prone to lose control of the vehicle. The vehicle may veer into the adjacent lane, where it may collide with, or sideswipe oncoming cars; overturn; or run off the opposite side of the roadway and crash.

A simple and cost-effective way to promote pavement edge safety is to adopt a standard specification for all resurfacing projects that requires a 30° - 35° angle “Safety Edge.” After paving, the adjacent material is graded flush with the top of the pavement.



Field measurement of the safety edge – prior to grading of the shoulder material

Rumble Strips and Rumble Stripes - They're not just for roadways with shoulders!

By now most engineers are familiar with or have encountered rumble strips on some of the State's major highways. The noise and vibration produced by rumble strips alert drivers when they leave the travel lane. Rumble strips is the term used for rumble strips painted with a retroreflective coating to increase the visibility of the pavement edge at night and during inclement weather conditions.

There are two main applications of rumble strips:

- Centerline Rumble Strips – They are primarily used to warn drivers whose vehicles are crossing centerlines of two-lane, two-way roadways.
- Shoulder Rumble Strips – They are primarily used to warn drivers they have drifted from their lane. A variation on this is the edge line rumble stripe, which places the pavement marking within the rumble strip, improving the visibility of the marking. This is more commonly used on roads with narrow shoulders and is now being used on roadways with no improved shoulder.

The exciting thing about rumble strips and stripes is that this important tactile warning can be added to thousands of miles of two-lane highways and local roads throughout Louisiana if engineers will simply include them in their overlay specifications on maintenance projects. Rumble strip application need not be limited to our major highways or highways with improved shoulders. Certain Federal Highway Administration documents suggest that the installation of rumble strips and stripes on two lane roadways

can reduce roadway departure crashes by as much as 32%. Fatal roadway departure crashes can be reduced by as much as 18% with the installation of rumble strips and stripes on two lane roadways.



Four-inch edge line rumble stripe placement on a rural highway

Other than at curves, it is difficult to predict where lane departure crashes will occur. The installation of the safety edge and rumble strips and stripes on Louisiana's two lane roadways appears to be a particularly effective, low cost way civil engineers can help drive down the number of fatal roadway departure crashes.

Relocation of Hazards

Civil engineers working for utilities can also help reduce roadway departure fatalities. Many times, utility poles struck or knocked down by a roadway departure crash are replaced with poles in the same hole as the damaged pole. Consider:

- Removing or relocating poles in high crash locations to less vulnerable locations.
- Shield drivers from poles in high crash locations with guardrails or crash cushions.
- Delineate poles that remain in the clear zone.

Longer term strategies include:

- Burying utilities at high crash locations
- Decreasing the number of poles along a corridor
- Using breakaway devices

Operations

The Louisiana Local Road Safety Program (LRSP), as operated by the Local Technical Assistance Program (LTAP) and the Louisiana Transportation Research Center in Baton Rouge, has recently toured the State offering a roadway departure workshop. The workshop described low cost methods local agencies can use to reduce roadway departure crashes. Eight basic and simple treatments were

offered to help reduce lane departure crashes on local roads. These treatments included:

1. Centerline – You need not stripe the entire roadway, if departures are occurring on the curves or in spot locations, you may elect to stripe only the curve or the spot.
2. Edgeline - Under certain conditions you may omit the center line marking and may provide only edgeline markings to assist motorists on high crash risk segments or points.
3. Horizontal alignment signs – These include turn signs, curve signs, reverse turn and curve signs. The Manual on Uniform Traffic Control Devices (MUTCD) has specific requirements on the type and placement of these signs when used.
4. Advisory speed plates for horizontal alignment signs – These signs give motorists important information about the operating characteristics of the curve.
5. Chevron alignment sign – When posted at regular intervals around a curve or in combination with the large arrow sign, they provide excellent cues to motorists regarding the location and severity of a curve.
6. Large arrow sign – When used alone or in combination with chevron alignment signs they provide excellent cues to motorist on the existence of a curve that may not be readily apparent.
7. Combination horizontal alignment/advisory speed sign – These signs supplement the standard horizontal alignment sign with advisory speed plate. This sign is placed at the beginning of the curve and supplements signs placed in advance of the curve.
8. Delineators – Inexpensive post mounted reflectors that help motorists around curves at night or in other low visibility conditions such as fog.

To find out more about reducing roadway departure crashes or to take advantage of the LRSP you are encouraged to contact Dr. Marie Walsh of LTAP at 225-767-9184.

Civil engineers need to remain aware of the severity and pervasiveness of fatal and serious injury roadway departure crashes in Louisiana. By paying attention to details in roadway design, by adding safety edges and rumble strips and stripes as part of maintenance overlays, and by becoming familiar with the application of basic traffic control devices designed to help motorists keep their vehicles on the road, we can reduce the number of roadway departure crashes and fatalities. We can live up to ASCE's Codes of Ethics which reads in part:

Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties.

- a. Engineers shall recognize that the lives, safety, health and welfare of the general public are dependent upon engineering judgments, decisions and practices incorporated into structures, machines, products, processes and devices.*

Dean Tekell, PE, PTOE is the principal engineer for Dean Tekell Consulting, L.L.C. in Lafayette. Dean is a registered professional engineer in the states of Louisiana and Alabama. He is also certified at a Professional Traffic Operations Engineer. Dean provides advice and design services to local governments on the proper application of signs, signals and pavement markings to streets and highways. He also works as a consultant for LTAP (Louisiana Technical Assistance Program) on local roadways. Dean has been recognized by State and Federal Courts in Louisiana, Texas, and Mississippi as an expert in traffic engineering, highway design and highway safety.

ASCE-T&DI Louisiana Chapter News

By Gay M. Knipper, Executive Committee

The ASCE-T&DI Louisiana Chapter just completed its first fiscal year of operations. Om P. Dixit has accepted the Chair position for the 2009-2010 year. The officers for the upcoming year are as following:

Chair: **Om P. Dixit** (C.H. Fenstermaker & Associates)

Vice Chair: **Gay M. Knipper** (PB Americas, Inc.)

Treasurer: **Miles Bingham** (URS Corporation)

News Letter Editor: **Karen Holden** (Providence)

Two new members were recently appointed to the Executive Committee. Daniel Aucutt, Aquaterra Engineering and Dr. Stanley Klemetson, McNeese University will bring their expertise in the field of transportation to our group.

The Chapter has established has established an active working group of members that is currently planning future activities. The Chapter has successfully hosted its first seminar in Baton Rouge. Three more seminars are planned for the upcoming year. If you interested in joining the Executive Committee, contact Om P. Dixit at om@fenstermaker.com.

The ASCE-T&DI Louisiana Chapter will host its second event entitled, **"NEPA - What Do I Wish I had Known Sooner?"** at 5:30 pm on Wednesday, October 14, 2009 at the LSU/LTRC facility in Baton Rouge. The speaker for this event is Ms. Noel Ardoin, PE, DOTD Environmental Administrator. She will address actions that trigger NEPA and provide an overview of the NEPA process, with emphasis on transportation projects and FHWA and DOTD processes.

ASCE T&DI Louisiana Chapter is planning the following future seminars:

Nov. 18 DOTD Project Delivery Stages *Dr. Eric Kalivoda*

Jan. 21 New Orleans Transportation Management Center *TBA*

If you would like a seminar on any special topic, please contact anyone on the Executive Committee and they will try to get it arranged.

More information can be found on the ASCE Louisiana Section Web site at www.lasce.org and ASCE New Orleans Branch Web site www.asceneworleans.org. To add your name to our mailing list and/or to join the Executive committee, e-mail Om P. Dixit at om@fenstermaker.com.

ASCE-SEI New Orleans Chapter News

By Om Dixit, PE, FASCE, Newsletter Editor

Since our report in May issue of this magazine, ASCE SEI New Orleans Chapter hosted two seminars and has planned the following future seminars in New Orleans:

August 6, 2009 – *Transforming the Project Delivery Process Using Building Information Modeling (BIM)*

James G Jacobi, (Walter P. Moore and Assoc., Houston, Texas) explained Building Information Modeling and how it can be used more efficiently for any structure from planning to operation stages. The seminar was attended by about 50 members.

October 15, 2009 – *Innovations in Offshore Lift Rigging and Salvaging Techniques* (3rd Herb Roussel, Jr. Marine Seminar)

Jon Kachaturian, VERSABAR, Belle Chasse, LA

Future Seminars:

The following dates are the projected seminar dates for 2009. The exact dates may change due to the availability of the speakers and UNO Lecture room.

November 18, 2009 – Rebuilding/Recovery of Pentagon

Allyn Kilsheimer, KCE, Washington, DC

December 3, 2009 – *Seminar on Timber Design*

Dr. V. Gopu, LTRC/LSU, Baton Rouge, LA

More details about these seminars will be posted on the ASCE New

Orleans Branch website as soon as they are finalized. The committee is looking for good topics and speakers for future presentations. Members with expertise in above areas would be welcome to join the Executive Committee. For any suggestion and information on joining the Executive Committee, contact Chairman William Rushing, Jr., PE, at Bill.Rushing@wsnelson.com.

ASCE SEI New Orleans Chapter had a change of officers for 2009-10. Mr. William Rushing, Jr., PE (Waldemar S. Nelson and Co.) has been elected as Chairman and Pawan Gupta, PE (URS Corporation) is appointed as Vice Chairman for 2009-10. James Danner, P. E. continues to serve as Treasurer and Om Dixit, PE continues to serve as Newsletter Editor. The outgoing Chairman Jay Jani, PE did great job of leading the Chapter during the past year. The chapter hosted 6 seminars and provided partial funding to University of New Orleans (UNO) Students for the Concrete Canoe Competition. ASCE SEI New Orleans Chapter also became a Sponsor for the upcoming ACI 2009 Fall Convention in New Orleans (Nov. 8-12, 2009). It also sponsored awards at the Regional Science Fair and provided volunteer support to the ASCE Sponsored Kid Tent at New Orleans Jazz Fest.

All seminars are held at the University of New Orleans. Seminar dates, pertinent information, and registration can be found on the New Orleans Branch website at www.asceneworleans.org. To add your name to our mailing list, e-mail Om P. Dixit at om@fenstermaker.com

LSU College of Engineering News

CSRS, INC. PLEDGES \$180,000 TO BENEFIT CIVIL & ENVIRONMENTAL ENGINEERING

by Mimi LaValle, College of Engineering and Scott Madere, LSU Foundation Public Relations Director

The Forever LSU campaign and the LSU College of Engineering recently announced a pledge of \$180,000 from CSRS, Inc., a Baton Rouge-based engineering, architectural, and program management firm, to establish and fund an endowed distinguished professorship in Coastal Engineering in the LSU Department of Civil & Environmental Engineering (CEE).

The CSRS Distinguished Professorship in Coastal Engineering is the first gift established to support faculty for the new Coastal Engineering program at LSU. Coastal engineering is an essential component of efforts to preserve and restore the coastal areas of Louisiana and beyond.

"This professorship marks a progressive step of paramount importance for the LSU Coastal Engineering program and our efforts to provide research and development of engineering systems and processes for estuarine-based coastlines," said College of Engineering Dean Richard Koubek. "I commend CSRS for its gracious financial contribution to the enhancement of our university and the quality of education our students will experience."

With an expected match of \$120,000 from the Louisiana Board of Regents, this professorship will help LSU faculty address the continuous threat of coastal flooding, the erosion of Louisiana's barrier islands and the loss of coastal wetlands.

"As first-hand observers to the very real challenge of protecting and restoring Louisiana's coastline, CSRS is committed to helping LSU initiate this unique and promising program aimed at the development of engineering systems and processes for coastal restoration," said CSRS principal Ronald Rodi, PE. "While this gift is the first of its kind, it is our hope that our gift will encourage others in the community to similarly show their support for this program."

The Coastal Engineering program at LSU was developed in response to the increased emphasis placed statewide on addressing the crisis of Louisiana's deteriorating coastline. The program provides a unique opportunity for those choosing to pursue a career in coastal protection and restoration engineering.



(l-to-r) Dr. Michael V. Martin, LSU Chancellor, Dr. George Voyiadjis, Chairman and Bingham C. Stewart Distinguished Professor for Civil & Environmental Engineering and LSU Boyd Professor, Dr. Astrid Merget, Executive Vice Chancellor & Provost, Mr. Garret Graves, Director of Coastal Activities, Office of the Governor, Mr. Ron Rodi, Principal, CSRS, Mr. Michael Songy, Principal, CSRS, Mr. Chris Pellegrin, Principal, CSRS, Mr. Curt Soderberg, Principal, CSRS, Dr. Richard Koubek, Dean, LSU College of Engineering, Maj. Gen. Bill Bowdon, (USMC, ret.) President & CEO, LSU Foundation (photo by Scott Madere)

"This gift will be a tremendous asset in helping us to retain top quality faculty for our new Coastal Engineering program," stated George Z. Voyiadjis, Boyd Professor and CEE Department Chair. "We are very appreciative to the CSRS partners, including LSU Engineering alumni Michael Songy and Ron Rodi for their generous support of this vital effort. We also applaud Mr. Rodi for his continued leadership as Chairman of our Civil & Environmental Engineering External Advisory Board as well as our Forever

LSU Campaign Steering Committee."

Founded in 1978, CSRS, Inc. is a Louisiana corporation wholly owned by Curtis D. Soderberg, AIA, Michael B. Songy, PE, PLS, Ronald J. Rodi, PE, and Christopher J. Pellegrin, AIA. CSRS provides a full range of professional engineering services to local, state and federal governments, educational and healthcare institutions, and industrial clients. For more information on CSRS, visit www.csrsonline.com.

Support for LSU CEE, like that shown by CSRS, helps the College of Engineering move closer to its Forever LSU Campaign goal of attaining \$100 million in support for the college. Forever LSU has an overall goal of attaining more than \$750 million for the university by the end of 2010. To find out how you can become involved with the campaign for LSU's future, visit www.eng.lsu.edu/alumni/contribute.html or www.foreverlsu.org.

ASCE SUPPORTS LSU'S COASTAL ENGINEERING PROGRAM

by Matthew Teller, LSU College of Engineering

The American Society of Civil Engineers (ASCE) supported the LSU College of Engineering's Coastal Engineering program, presenting a check to the LSU Foundation for \$20,000 in support of the program. LSU's Coastal Engineering program in the Department of Civil Engineering at was created to supply new coastal scientists/engineers that Louisiana will need to care for the coastline.

Over the last few years, there has been a heavier focus placed on the increased risks of the Gulf Coast's unique environment, which has given Louisiana an increased need for qualified scientists to find protection solutions. LSU hopes to combine engineers with scientists to address problems that are not only specific to the Gulf Coast, but that can be applied to deltaic regions around the world. By creating the Coastal Engineering program, LSU looks to supply Louisiana with the knowledge to create engineering structures needed to protect the coast and sustain the natural processes critical to resilient delta landscapes.



(L-to-R) Billy Wall, President of the ASCE Baton Rouge Branch; Ron Rodi, Chair of the CEE External Advisory Board and CEE Department for Forever LSU campaign; George Voyiadjis, Chair of the LSU Department of Civil and Environmental Engineering; and Don Eisenberg, Associate Director of Development.

ASCE is a professional organization representing more than 146,000 civil engineers. The oldest national engineering society in the United States, ASCE was founded in 1852. ASCE's goal is to facilitate the advancement of technology to enhance quality, knowledge, competitiveness, sustainability, and environmental stewardship, as well as to encourage and provide the tools for lifelong learning to aid members' continued growth throughout their careers. ASCE also aims to promote professionalism and the profession throughout society, to enhance the stature of civil engineers and to influence public policy. ASCE looks to develop and support civil engineer leaders to broaden members' perspectives, enhance their career growth, and promote the public interest. ASCE advocates infrastructure and environmental stewardship to protect the public health and safety and improve quality of life.

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