LOUISIANA CIVIL ENGINEER

Journal of the Louisiana Section **http://www.lasce.org**

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Bonnet Carre' Spillway proposed by Raymond Thomassy in 1860

photo courtesy of the U.S. Army Corps of Engineers

FEATURE:

**Géologique practique de la Louisiane –
An Early 19th Century Proposed Sediment Diversion**

NEWS:

Geotechnical Instrumentation for Construction Monitoring

Spring Conference: APRIL 28-29, 2016 in Shreveport LA

**FEBRUARY 2016
VOLUME 24 • NO 2**

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AMERICAN SOCIETY OF CIVIL ENGINEERS

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The Louisiana Section of the American Society of Civil Engineers was founded in 1914 and has since been in continuous operation. The Section consists of the entire state of Louisiana and is divided into four branches that directly serve over 2000 members. They are the Acadiana Branch centered in Lafayette, the Baton Rouge Branch, the New Orleans Branch, and the Shreveport Branch.

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AMERICAN SOCIETY OF CIVIL ENGINEERS

ASCE NATIONAL CONTACT INFORMATION:
Phone: 1-800-548-ASCE
E-Mail: gsd_master@asce.org

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President's Message

By Christopher Humphreys, PE

Christopher Humphreys, PE

By the time you read this I should be saying Happy Mardi Gras as we will be well into the Carnival season in Early February this year. As I write however it's just a week into the new-year so Happy New Year everyone. I hope you had a restful holiday season and 2016 is starting well. The new calendar year is starting but the ASCE "New Year" began on October 1, 2015 and since then the Section Officers and Board have been working hard for you the members.

We have recently agreed to share the services of a highly qualified lobbyist with the Louisiana Engineering Society (LES) to represent ASCE in the state legislature and to promote and protect the interests of the civil engineering profession. Special interests groups and individuals have recently campaigned against our profession, the licensure process, and the licensure laws and rules. Special interests groups and individuals want to broaden the definition of engineering to allow other disciplines to practice civil engineering and do not want to comply with the current licensure laws and rules to practice civil engineering. As Civil Engineers we hold paramount our obligation to safeguard the life, health and safety of the public. Therefore, the Louisiana Section of ASCE agreed to help fund the services of Mr. Randy Haynie of Haynie Associates. Mr. Haynie has lobbied the Louisiana Legislature for 33 years on behalf of companies, professions and associations. Hopefully you were able to meet Mr. Haynie when he presented How to Effectively Communicate with Your Legislator at the Joint Engineering Societies Meeting in Lafayette, which ASCE was a sponsor. Please contact the Section Board if you want more information about our lobbyist. I'd like to add that other states are seeing similar campaigns of this nature and lobbyists have proven to be an advantage when promoting and raising awareness of issues affecting our profession; therefore, the Board was successful in being awarded a one time allotment from ASCE National to defray fifty percent of our cost for Mr Haynie's services. We are excited about the potential benefits a professional lobbyist affords the Louisiana Section.

Our Government Relations Committee will utilize Mr. Haynie to support their efforts to keep Louisiana's Infrastructure needs at the forefront of everyone's mind including our newly elected Governor, John Bel Edwards. As a longtime member of the legislature, Governor Edwards is surely familiar with the 2012 Report Card for Louisiana's Infrastructure. This is an outstanding tool for highlighting the condition of our state's infrastructure. As I stated in my last President's Message, one of my goals this year is to get a 2017 Report Card Committee established and working. The Section's Government Relations Committee (GRC) is leading this effort and had a kick off meeting to organize a 2017 Report Card Committee on January 25, 2016. The GRC is currently seeking technical members to sit on the subject subcommittees or even be subcommittee Chairs. Your input is important. I encourage you to contact the GRC or a member of the Section Board and get involved. Please see more information on page 22. Come be a part of a report card that has been nationally recognized as ASCE best practices, as well as a publication that will serve the public of Louisiana and our profession.

In December of 2015 Congress passed and President Obama signed into law the Fixing America's Surface Transportation (FAST) Act. The FAST Act is a five year law to improve the nation's transportation infrastructure. The law reforms and strengthens transportation programs, streamlines the project approval process and makes a strong commitment to safety. In addition and importantly it increases funding 11 percent over the five year term and provides long term certainty and more flexibility to state and local governments. The funding levels are not where they need to be to reduce traffic congestion and meet the needs of our transportation system; however, knowing that long term funding is available will allow more projects to move forward. ASCE National at the federal level and the Louisiana Section's Government Relations Committee at the state level worked hard to get a long-term transportation-funding source approved into law. I am optimistic for the continued progress that will be achieved with the 2017 Report Card and our lobbyist Randy Haynie, this year and years to come.

I also stated in my last message that I want to help the branches provide more educational opportunities to underserved areas of the state. In December I joined Region 5 Governor Ali Mustapha and Shreveport Branch member and former president Mitch Guy at a meeting of the Louisiana Tech ASCE Student Chapter to talk about life after graduation and the benefits of joining ASCE as a professional member. The students were very engaged and interested in discussing their future as civil engineers. I enjoyed the experience and would be happy to support all of our branches in similar efforts. I would appreciate feedback from our members in these underserved areas of the state as to where this is needed and what technical presentation you would be interested in.

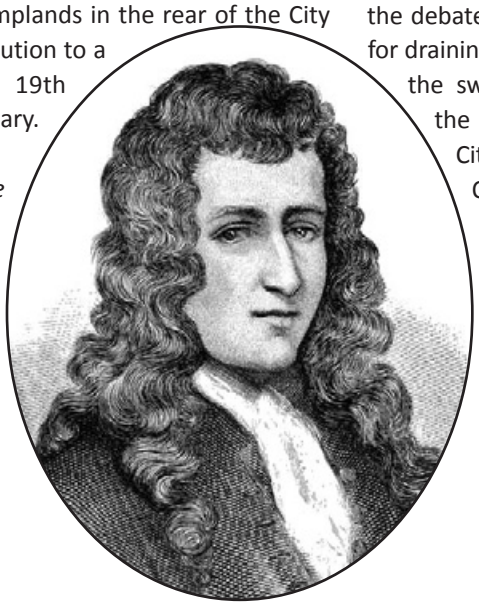
Happy Mardi Gras. Be safe.

Géologique practique de la Louisiane – An Early 19th Century Proposed Sediment Diversion

By Dennis Lambert, PE

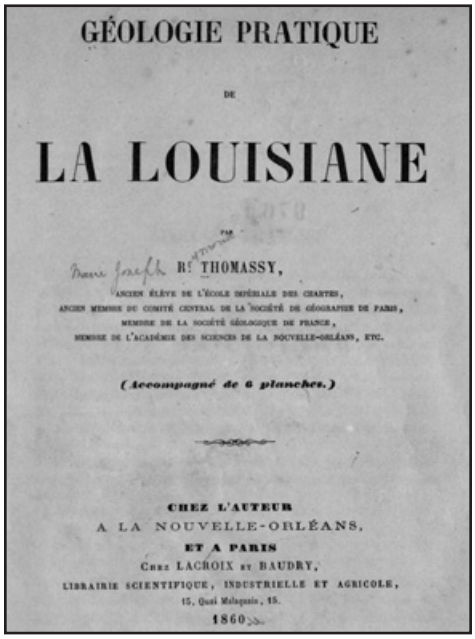
Dennis Lambert, PE

At first glance, one might ask what *Géologique practique de la Louisiane* could be – one answer might be "a textbook, in French, on Louisiana geology." While that would be a reasonable guess, after closer examination one discovers an essay on proposed sediment diversions to elevate swamplands in the rear of the City of New Orleans and south, a contribution to a debate occupying much of the 19th century. "Prove it", I offer this summary.



Cavelier de La Salle and his Voyages and Maps, the original subject of R. Thomassy

Les Écrits de langue française en Louisiane au XIXe siècle by Edward Larocque Tinker (1923), a compilation of references of French Writings in Louisiana, gives a biographical sketch of Marie Joseph Raymond Thomassy: born in Montpellier, France in 1810, educated at the *Ecole impériale des Chartes*, where he studied paleography and philology. A member of the *Geographical Society of Paris* and of the *Geological Society of France*, Thomassy traveled, studied and after completing his studies wrote manuscripts of his own, at first dealing with historic inscriptions of monuments and religious matters. His interest soon shifted to French colonies and Italy, on topics including governance, taxes, and free commerce. After a visit to Holland Thomassy's writings shifted to the policies of salt manufacturing, a subject that eventually drew him to Louisiana where he formed the Louisiana Salt Manufacturer Co. in 1855. During those days, salt manufacturing was typically a process of filling and drying ponds in polders or leveed squares, requiring knowledge in geology, geography, and hydraulics. Having arrived in New Orleans, Thomassy became a member of the *New Orleans Academy of Sciences*, established himself as an industrialist, and began to apply himself not only in salt manufacturing but in the debate on methods for draining or elevating the swamplands to the rear of the City of New Orleans.


GÉOLOGIE PRATIQUE

DE

LA LOUISIANE

PAR

M. Marie Joseph R. THOMASSY,

ANCIEN ÉLÈVE DE L'ÉCOLE IMPÉRIALE DES CHARTES,
ANCIEN MEMBRE DU COMITÉ CENTRAL DE LA SOCIÉTÉ DE GÉOGRAPHIE DE PARIS,
MEMBRE DE LA SOCIÉTÉ GÉOLOGIQUE DE FRANCE,
MEMBRE DE L'ACADÉMIE DES SCIENCES DE LA NOUVELLE-ORLÉANS, ETC.

(Accompagné de 6 planches.)

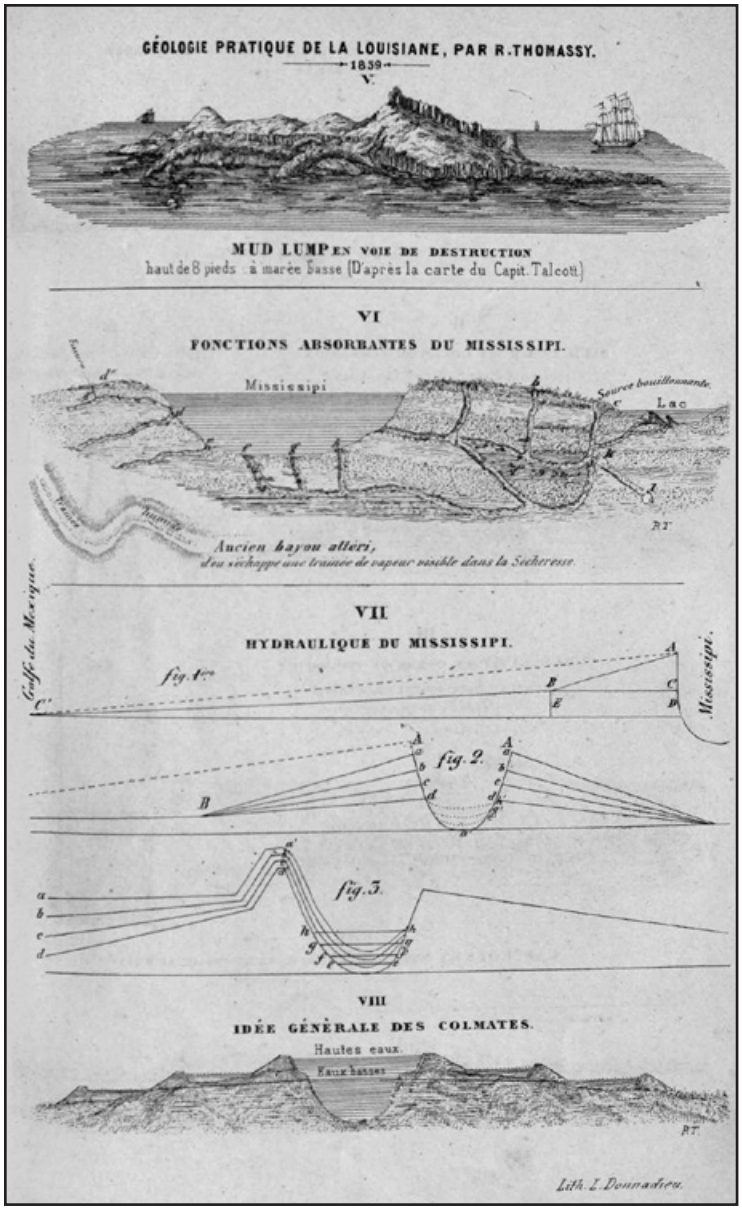
CHEZ L'AUTEUR
A LA NOUVELLE-ORLÉANS,
ET A PARIS
CHEZ LACROIX ET BAUDRY,
LIBRAIRIE SCIENTIFIQUE, INDUSTRIELLE ET AGRICOLE,
15, Quai Malaquais, 15.
1860

Géologie Pratique de la Louisiane (R. Thomassy, 1860)

The growing city of New Orleans had suffered repeated, devastating Mississippi River floods, the results of catastrophic levee breaches including the MacCarty Crevasse in 1816, the Ames Crevasse in 1831, the Algiers Crevasse in 1847, the Sauve Crevasse in 1849, the Bonnet Carre Crevasse in 1850 and the Bell Crevasse in 1858. As a member of the *New Orleans Academy of Sciences*, Professor Thomassy exchanged ideas with Dr. Samuel Cartwright, a physician and professor at the University of Louisiana, (at the time located in New Orleans) distinguished for his investigations into yellow fever and cholera, and author of essays on, Louisiana natural history, drainage, and levees, and their connection to yellow fever and public health. Dr. Cartwright's essays are notable for their references to Professor Thomassy's concept of sediment diversions referred to as a ***"System of Colmates"*** as in the following excerpt from De Bow's Review in 1859:

*"By means of **colmates**, the most extensive drainage could be effected in Louisiana, at small expense. These are artificial aqueducts, with contrivances to put water under effectual control, as explained in the letter of the Dutch engineer [W.A. Scholten] to Professor Thomassy, given in a late number of the Review. Thus, by throwing the water over the fields, and regulating its stay and its deposits, great power would be exercised in enriching and raising the soil, etc.*

Dr. Cartwright would apply the system of colmates to what he calls "Malay Louisiana," or that extensive shaking prairie, reaching down the Mississippi to the Balize [the current Delta Lobe or mouth of the Mississippi River], and spreading out almost indefinitely. For a distance of 80 miles, the Mississippi is allowed to carry its invaluable sediment past that prairie, to throw it into the sea, or raise bars for the obstruction of our commerce! A territory large as Delaware could here be speedily reclaimed to the uses of man."



Colmates originally proposed sediment diversions in R. Thomassy's manuscript in 1860

Professor Thomassy, was corresponding with a Dutch Industrialist and Chief Engineer of Rotterdam, Willem A. Scholten, often cited as W. A. Scholten. An editorial of the essay and letter from W.A. Scholten appear in the same issue of De Bow's Review:

*"**True Hydraulic Engineering Skill**, is, for Louisiana, a matter of much importance, and when so many emergencies may arise from the river or from the sea, we should have it always at hand. It is as necessary for protection against tides and overflows, for the best development of our numberless water courses, for draining our swamplands, and making them healthy and productive, as for improving the dry field, the subsoil of which is too often filled with stagnant water and putrid humidity, injurious to vegetation and to human life.*

*Mons. R. Thomassy…advocates, with ability, the opinion that the Mississippi itself may be used, through its copious sedimentary deposits, as an ample and abundant means of reclaiming and protecting our lowlands, and furnishes us a letter to the same effect, from one of the most scientific and experienced engineers of Holland **[Willem Albert Scholten referred to as W.A. Scholten]**, a country in many respects similar to Louisiana. We give the letter:*

[To] Mons. R. Thomassy, at M. Thomassy's, member of the Imperial Court, Paris [Societe geologique de France]:

***Sir:** I have read with much pleasure your letters concerning the draining of marshes in Louisiana, and I agree with you on the proposed system of colmates.*

The other system (system of embankments) has great difficulties, because it is an unfit system—a terrible violation of the laws of nature.

*Before the construction of embankments, the waters of the rivers spread themselves over a large surface, and did not rise (far from it) to the height they reach now. But soon each one built up, separately, embankments around his possessions, or some neighbors gathered together to surround their fields with a common embankment; so that separated little Polders were formed. It was only at the beginning of the fourteenth century that commissions for embankments were organized, and that the embankments were placed under a common government, and put by the Comtes **[Counts]** or Ducs of Gualdre **[Dukes]** under their own jurisdiction or ban (whence the name of Bandyk is derived).*

*Firstly, the embankments were low; but, from time to time, they were elevated and enlarged. During recent years, the embankments of the Betuwe **[river situated between the Waal and Rhine in the Dutch province Gelderland]**, the Wahal **[or Waal, branch of river Rhine]**, and the Rhine, have been raided considerably. Works of fascines **[i.e. cut bank]** and creche **[i.e. fill bank]** in the rivers are from time to time augmented. From all this the situation of the river has, without doubt, become more injurious to the Polders. It has added to the elevation of the water, and has contributed to the great number of crevasses and overflows which makes one look with anxiety to the future, however strong may be the measures adopted.*

From thin short historical resume, one may see clearly that the system of embankment was, from the first, a terrible error against the laws of nature, which are never violated with impunity, either by ignorance or egotism. As to the soil of Polders, it is still what it was of old, and has become from time to time, by the solid and slimy elements which the rivers carry there by their yearly Inundations. In stopping these inundations, the country was deprived of the benefit which the rivers were granting anew every year. This loss was instantly accompanied with many difficulties and dangers, which were increasing as the people persevered under that bad system.

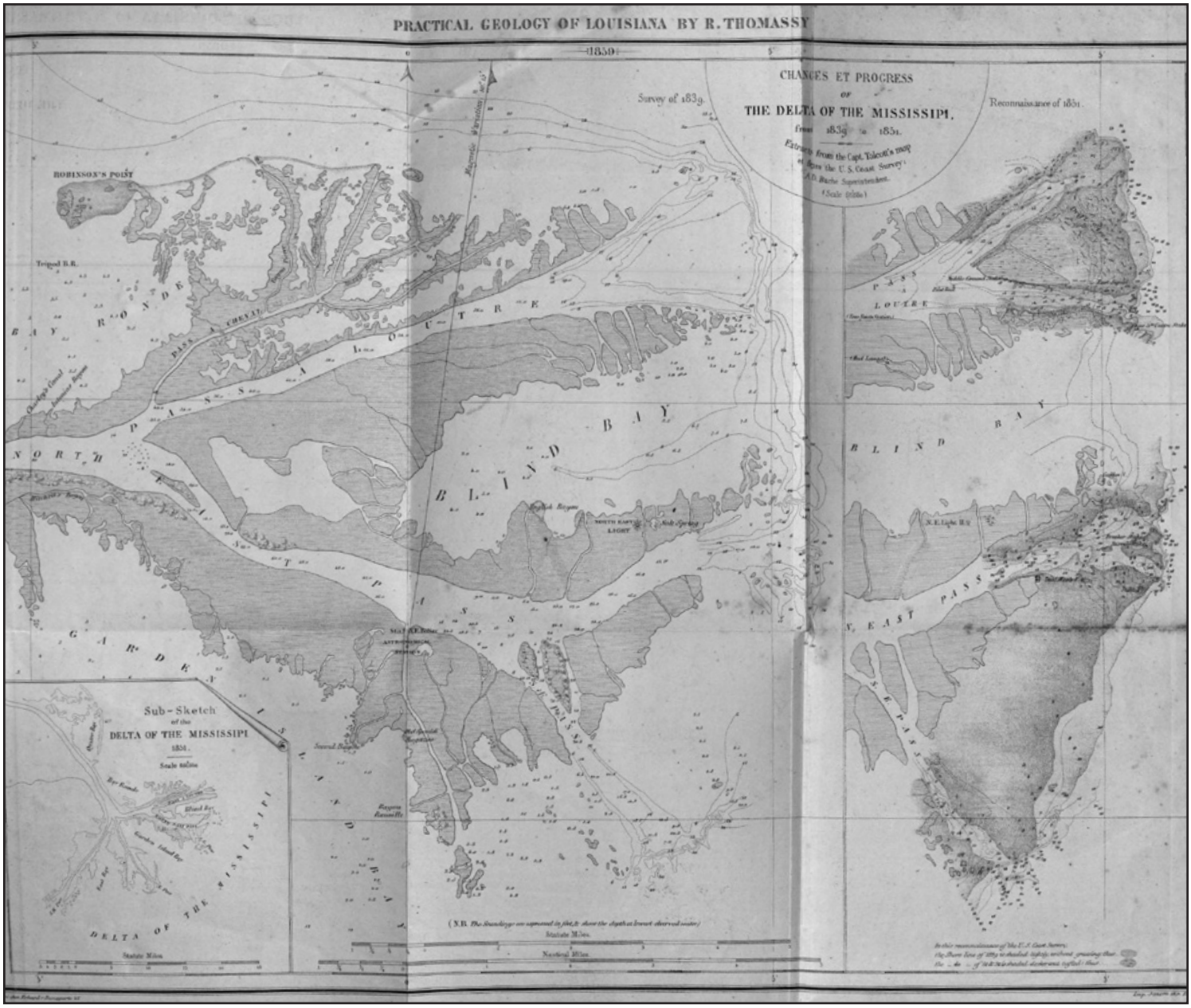
Our ancestors have shut up their country and districts in kinds of caves, as if that state of things could remain so forever without changing! In not perceiving that these countries were overflowed and enriched in advance by the mud during the winter, as well as augmented and raised up from time to time, they have caused the loss of this precious mud into the rivers, into the sea, and elsewhere, whilst their lands were sinking down each day more and more. Yes, it is already so much so that they must now turn the water several leagues distant, by a double play of windmills, to carry it up to the river as to a garret, when in former times the country was drying itself with water gates.

Although the system of embankments is still maintained, and though there are different reasons which may still compel their existence, it is, and it remains still, a dangerous system, and I prefer much more your system of colmates. But what to do now? It is too late. I send you herewith a part of what I promised you, and in return, I recommend myself, and hope to receive, from time to time, such good advices like those you have given me.

Accept, sir, my sincere regards.
W. A. Scholten"

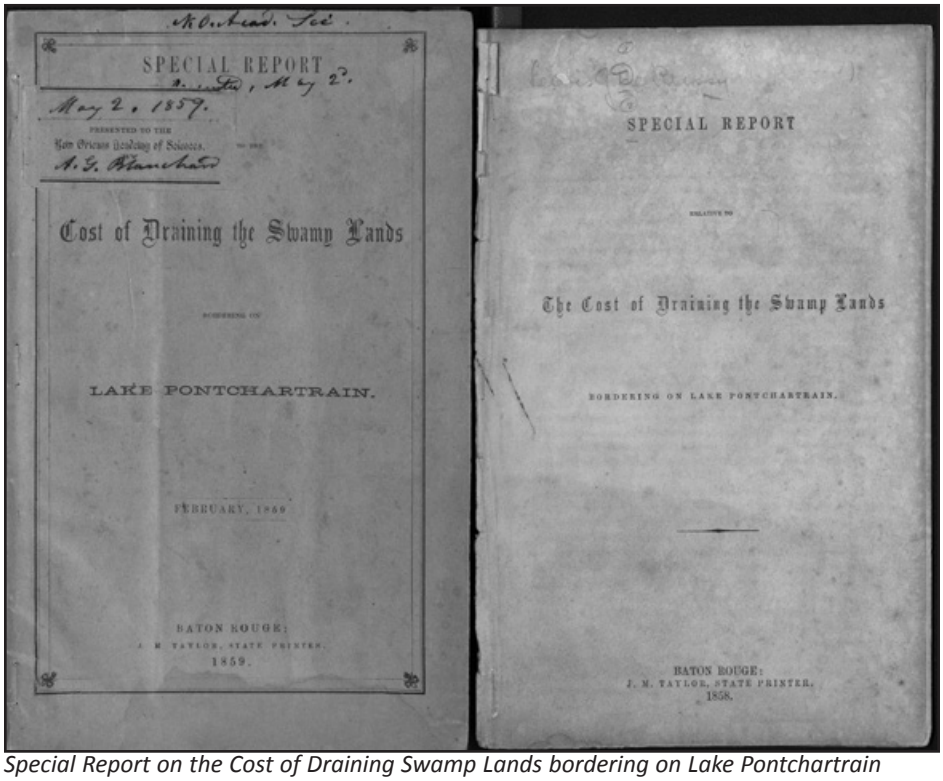
This seems appropriate to reflect upon as we embark on the largest restoration projects in the history of Louisiana, directed to build land by diverting sediment during high water events of the Mississippi River.

It is shown in the published manuscript, *Géologique practique de la Louisiane*, Professor Thomassy began corresponding with



The Delta of the Mississippi River - Changes recorded by R. Thomassy between 1839 and 1851 using extracts from Captain Talcott's Map, U.S. Coast Survey: A.D. Bache, Superintendent

W.A. Scholten as early as 1857. The 350-page manuscript has yet to be translated in its entirety from French to English, where they contemplated, through their letters the "*Systèmes contraires des levees et des déversoirs du Mississipi"* or a contrary system of diversions to levees of the Mississippi [River] based on early work done in Italy. The most poignant citation of the proposed "System of Colmates" was given in two reports from the Lewis G. DeRussey, a French planter in Natchitoches, Louisiana and was commissioned as the State Civil Engineer from 1848 to 1861 – *Special Report Relative to the Cost of Draining the Swamp Lands Bordering on Lake Pontchartrain* in 1858 and 1859 to the Chairman of the Board of Commissioners, Henry St. Paul. The report states:



Special Report on the Cost of Draining Swamp Lands bordering on Lake Pontchartrain (1858-1859)

> "*we propose to suggest the adoption of the system known as the System of Colmates,* ***for filling and elevating, by river deposits****, the large district of country in rear of the city of New Orleans and bordering the Lake Pontchartrain, instead of the establishment of regular and permanent drainage…"*

This is on the first page of the report. Colmate is a French verb meaning "fill in; plug in". The report continues on and I feel is so prophetic.

> "*However, the best means of reclaiming the immense body of lands in our State, now more than half the time submerged, useless, and we might say, pestilential, must be of the utmost importance in reference to the prospective improvements which, at some time, we hope not far distant, must engage the public mind; we take this opportunity to recommend legislation authorizing an experiment of the system already referred to upon some one of the subdivisions we have made…*
>
> *There must be current water, charged with alluvium, susceptible of being directed upon lands to be improved. The lands must be upon lower level than the passing water. There must be a declivity from the surface of the flooded lands, by which to drain off the water it has deposited its sediment by repose. These facilities are all present in any part of the country proposed for the experiments; for although the swamp district rear of the city can be considered in no other light, in reference to drainage, than merely a dead level, we have still the declivity of more than eight feet from the river ridge to the lake; and if we imagine levees, running back from the ridge towards the lake, with cross levees along the lake shore meeting these and closing them, then let us imagine also suitable conduits (either by canals with locks above ground or feeding pipes underground) to receive water into these leveed squares, and also proper outlet gates to let off the water towards the lake when it has become clarified, we have at once an idea of the proposed experiment. The process of filling and emptying these squares would be of course be continued as long as the river stage would permit. By this means, and judging from the quantity of solid matter carried along by the current of the Mississippi, we are much inclined to believe that filling and raising the swamp land would be much sooner obtained than it has been estimated, and it would, when finished, certainly leave the improved district in much better condition for habitation and cultivation than its original low level and necessity of permanent artificial drainage could place it."*

*The "**System of Colmates"***, sediment diversions, were originally practiced by the Egyptians on the Lower Euphrates River and later adopted by the Italians in Tuscany. It appears Professor Thomassy was familiar with Vittorio Fossombroni's published work, entitled, *Memorie Idraulico Storicbe supra la Val di Chiana*, Firenze 1769 where the Italians described the diversion of alluvium charged water to elevate the marsh in the valley of the Lower Arno. Fossombroni explained the declivity of the bed of the Chiana, a stream between the Arno and the Tiber. The alluvial deposits carried by the Chiana and numerous other streams into the Arno, tended to raise the bed of the Arno. The Italians later discovered that those same deposits could be used to elevate the marshland. The system in Tuscany was referred to as the colmata system and previously described by Leonardo da Vinci in his writings as being and originally designed by Evangelista Torricelli, for the reclamation of the marshy Valdichiana, one of the four valleys around Arezzo. Fossombroni implemented it restoring 150,000 acres of marsh. It was also used in Central Italy, in the alluvial Grosseto plain, on the Ombrone River. Later, the English adapted the colmata system as a system of warping used on the Trent and Humber Rivers.

It turns out this system is used extensively for agricultural purpose though one may ponder could it be done off the Lower Mississippi River. As told by Tinker in Professor Thomassy's biography:

> *One day before an assembly in New Orleans, the chevalier Thomassy expounded the plan he had conceived to prevent the overflow of the Mississippi. He incidentally remarked that everything that had been attempted until then was contrary to the most elementary principles of science. One of the Creoles present ventured to say that the methods that had succeeded for the small rivers of Europe could perhaps be found applicable to a river like the Mississippi. Thomassy made a disdainful gesture, adding: "How the Americans are ignorant! There are rivers in Europe so great that the Mississippi is only a mill course beside them."*
>
> *The Creole angrily replied: "Monsieur, I will not allow a phony scholar to diminish in my presence the longest river in the world," and slapped him. A duel resulted. Thomassy was wounded, the sword of his opponent having struck his mouth.*

In 2015, the duel of this method of elevating land, the diversion of sediment from the Lower Mississippi River into our swamplands, is yet to be decided. With the fine work of engineers and scientists, at the Coastal Protection and Restoration Authority, the Water Institute of the Gulf and many of Federal agencies and professors in academia, a solution to our ever sinking land may finally be constructed and yet possibly remembered as the forgotten work of Professor R. Thomassy as cited in the Daily Picayune on August 2, 1879 – ***The Great Problem, Drainage of the City of New Orleans and Its Environs, Plans which have been proposed in the Past: The Interesting Work of Mr. Thomassy and the System of Colmates.***

The Daily Picayune.

SATURDAY MORNING, AUG. 2, 1879.

LOCAL MISCELLANY.

THE GREAT PROBLEM.

Drainage of the City of New Orleans and Its Environs.

Plans which Have been Proposed in the Past.

The Interesting Work of Mr. Thomassy.

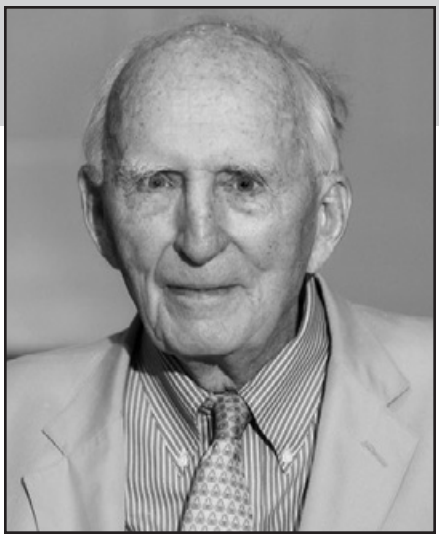
And the System of Colmates.

The Daily Picayune, August 2, 1879

Raymond Thomassy is credited with the concept of the Bonnet Carre' Spillway in the Encyclopedia Britannic. Though the spillway was finally built 70 years after his proposal to mitigate the height of the River flood stage, we may also see his simple common sense approach to elevate swamplands by constructing sediment diversions nearly 160 years later!

Dennis Lambert, PE *is the Chief Market Manager for COWI North America, Inc. and is a member of the Independent Technical Review Team for the four Proposed Sediment Diversions on the Lower Mississippi River south of the City of New Orleans.*

IN MEMORY



William Barrett Conway, PE
January 15, 1931 - December 14, 2015

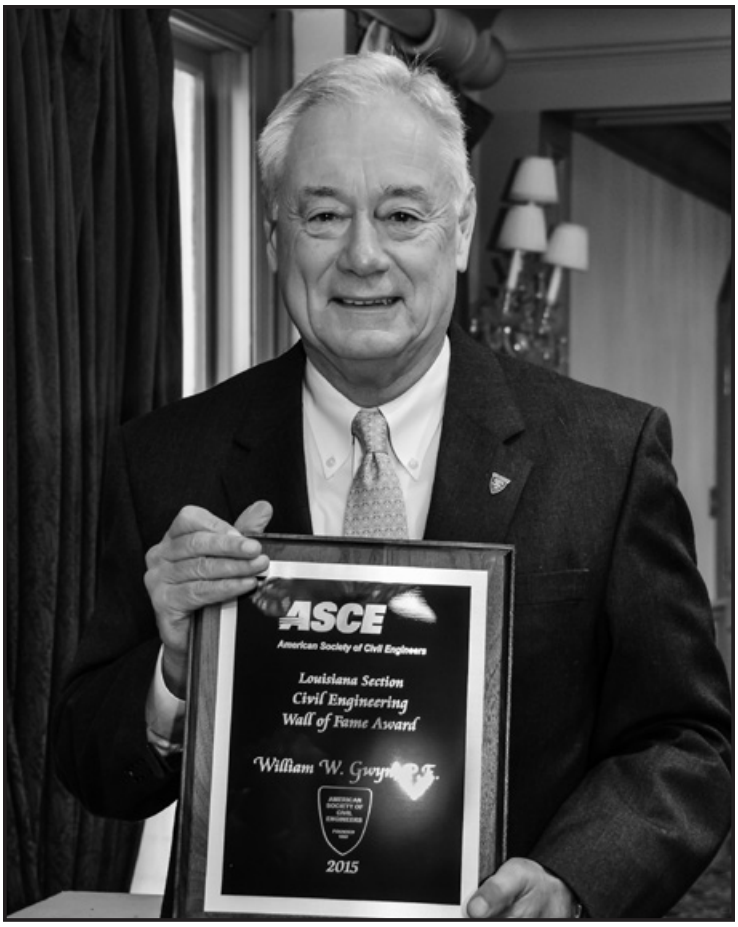
William B. Conway, 84, who as CEO of a leading civil engineering firm, was the Principal-In-Charge for the design of the Greater New Orleans #2 Bridge, died on December 14, 2015 in Ochsner Hospital. The cause was congestive heart failure. Mr. Conway, an ASCE New Orleans Branch member, has been a member of ASCE since 1954. Mr. Conway won the ASCE Louisiana Life Time Achievement Award in 2005 and the Section Wall of Fame Award in 2013. Mr. Conway was a partner in Modjeski and Masters, a national engineering firm, from 1969 until his retirement in 2007, having served as CEO since the firm incorporated in 1992 through 2004. His career included many notable milestones and accomplishments, particularly in long-span bridge design. He was the Principal-in-Charge for eight award winning Mississippi River Crossing projects, including the Interstate I-10 Bridge in Baton Rouge, the Interstate 310 Bridge at Luling and the Greater New Orleans #2 Bridge, which was the second longest cantilever span in the United States. Later projects directed by Mr. Conway included the seismic retrofit of the steel portions of the San Mateo-Hayward Bridge in California and the widening of the Huey P. Long Bridge over the Mississippi. Mr. Conway received many engineering awards including the Louisiana Lifetime Achievement Award and the prestigious John A. Roebling Medal for lifetime achievement in bridge engineering. After serving as a Seabee in the US Navy at Quonset Point, Rhode Island for two years, Mr. Conway joined Modjeski and Masters in 1957 in Harrisburg, Pennsylvania. He moved with his young family to New Orleans in 1961, fell in love with the city and made it his home. In lieu of flowers, memorials may be made to Trinity Episcopal School, Trinity Episcopal Church, or the charity of your choice . To sign and view the guest book, please visit www.lakelawnmetairie.com.

President William W. Gwyn Receives "Wall of Fame" Award from ASCE

Eustis Engineering President William W. Gwyn was presented the "Wall of Fame" award Sept. 11 by the Louisiana Section of the American Society of Civil Engineers (ASCE). The event was held at the Chateau Golf & Country Club in Kenner.

"You sit behind a desk and you think you're anonymous, but you're really not," Gwyn said. "People really do appreciate what I do. It's nice to be recognized."

The "Wall of Fame" honors civil engineers who have made outstanding contributions to the profession. To win the Louisiana Section's highest award, Mr. Gwyn was required to be nominated by the New Orleans branch of the ASCE, be a fellow or life member of the ASCE at least 55 years old, be endorsed by three licensed professional engineers, and meet other professional criteria.



William W. Gwyn, PE

The professional criteria included significant contributions to civil engineering, lifetime service or involvement in ASCE, and other evidence of character, integrity and/or technical competence.

"Certainly the award is rooted in the support that I've had at Eustis, and the support that Eustis gives ASCE," Mr. Gwyn said.

Some of Mr. Gwyn's significant contributions to civil engineering include his role as the Geotechnical Engineer of Record for the Inner Harbor Navigation Canal surge barrier in 2014, and his spearheading of Eustis Engineering's post-Katrina emergency upgrades to levees and floodwalls as well as the design of interim pump stations at New Orleans' outfall canals. As far as lifetime service, Mr. Gwyn received the Engineer of the Year and Lifetime Achievement Awards from both the New Orleans Branch and the Louisiana Section.

"It's an honor; it really is," Mr. Gwyn said. "It's awarded by your peers."

Mr. Gwyn has been an ASCE member since 1970, when he earned his degree in civil engineering. As company president, he encourages and funds participation of Eustis Engineering's staff in the ASCE and other professional organizations.

"I think the biggest benefit of ASCE is that it provides a vehicle for continuing education and networking," Mr. Gwyn said. "ASCE also has the added benefit of providing professional journals that are published on a regular basis."

Randy Eustis, a senior project manager and Executive Vice President at Eustis Engineering, introduced his colleague of 32 years. He spoke of Mr. Gwyn's involvement in two ground-breaking projects. The first was the extension of runways at the Louis Armstrong New Orleans International Airport, which required portions of the Lake Pontchartrain levee to be relocated. This was the first time a Greater New Orleans levee was reinforced by a private company. The second pioneering project was when Eustis Engineering used dynamic pile testing during the construction of Harrah's New Orleans Hotel and Casino. This was the first time a private company had used this technology in the New Orleans area.

After a long and eventful career, "the award really is a gold star on his resume," Mr. Eustis said.

Boyd Professor George Z. Voyiadjis Receives "Wall of Fame" Award from ASCE

Last September, Dr. George Z. Voyiadjis, Boyd Professor and Chair of the LSU Department of Civil & Environmental Engineering, was the recipient of the Louisiana Section ASCE Civil Engineering Wall of Fame Award. This wall of fame, established by the Louisiana Section ASCE in September 2002 as part of the ASCE 150th Anniversary, is to recognize those individuals who have made outstanding contributions to the civil engineering profession.

George Z. Voyiadjis, PhD

Voyiadjis was also recently named a Distinguished Member of the American Society of Civil Engineers. Since the society's founding in 1852, only 649 ASCE members have been elected to receive this honor.

"My experience in industry and my academic appointment overseas has allowed me to think in a more global sense and at the same time stay relevant to engineering applications in my research endeavors. That's what keeps me grounded and gives me the ability to continue to do all this work." said Voyiadjis.

An LSU Boyd Professor (the highest professional rank), Voyiadjis has forty one years of experience in administration, research and education in university and industry. For the last fourteen years he has served as Chair of the LSU Department of Civil and Environmental Engineering. He has two patents, over 275 refereed journal articles and 18 books to his credit.

He received the 2008 Nathan M. Newmark Medal of the ASCE among other awards. Voyiadjis is a Foreign Member of the Polish Academy of Sciences and the Korean Academy of Science and Technology. He also received the 2010 Associate Editor Award of the Journal of Engineering Mechanics, as well as the Educator of the Year Award in 2008 from the State of Louisiana Section of the ASCE.

Voyiadjis was on the Board of Governors of the EMI of the ASCE. He was the Chief and Founding Editor of the Journal of Nanomechanics and Micromechanics of the ASCE (2010-2014).

He is known for his pioneering contributions in high energy impact damage of structures and materials. Following the Space Shuttle Challenger disaster Voyiadjis led a joint effort from 1986-1989 on the analysis of the rupture of the fuel tank of the shuttle that was funded by NASA-LSU-IBM and Martin Marietta.

He was on the Board of Governors of the Engineering Mechanics Institute of the American Society of Civil Engineers, and Past President of the Board of Directors of the Society of Engineering Science. He is currently the Chair of the Executive Committee of the Materials Division (MD) of the American Society of Mechanical Engineers. He was also selected by Korea Science and Engineering Foundation (KOSEF) as one of the only two World Class University foreign scholars in the area of civil and architectural engineering to work on nanofusion in civil engineering. This is a multimillion research grant.

Voyiadjis iterated that "Working with my students has been the catalyst of my success in my academic career. The importance of this interaction is to challenge them but also allow them to interact with you through the evolution of the research work. Do not be afraid of failure as it is the gate to knowledge and eventual success in your endeavors. Always be proactive in initiating new areas and concepts as this may lead to proposing groundbreaking solutions for real life problems."

"It is a privilege being a civil engineer."

ASCE CONFERENCE AGENDA

2016 Annual Spring Meeting and Conference April 28-29, 2016

Shreveport, Louisiana

Conference Agenda Thursday, April 28, 2016		
Time	**Technical Track 1**	**Technical Track 2**
Location	***TBD***	***TBD***
7:30 am - 8:30 am	**Conference Registration**	
8:00 am	**Exhibit Area Opens**	
8:00 am – 9:00 am	***Life Safety Code – Part 1*** *Captain Rodney Taylor* *Louisiana State Fire Marshal's Office*	***Roles & Responsibilities of the Safe Drinking Water Program*** *Joey Smith, PE* *Louisiana Dept. of Health & Hospitals*
9:00 am - 9:50 am	***Life Safety Code – Part 2*** *Captain Rodney Taylor* *Louisiana State Fire Marshal's Office*	***Underground Retention/Detention*** *Jonathan Burks* *ADS Pipe*
9:50 am - 10:10 am	**Break in the Exhibit Area**	
10:10 am - 11:00 am	***Snap-Tite Culvert Rehabilitation*** *Scott Brignac & Don Leblanc, PE* *Snap-Tite*	***TBD***
11:00am - 12:00noon	***Concrete Cloth*** *Christina Bajewski, PE Industrial Fabrics, Inc.*	***TBD***
12:00 noon - 1:15 pm	**Awards Luncheon - Dr. Norma Jean Mattei, Ph.D, P.E., ASCE National President-Elect** ***Engineering Ethics & ASCE Strategic Initiatives***	
1:30 pm - 2:30 pm	***Experimental Evaluation of Rehabilitated Metal Culverts*** *Shaurav Z. Alam, PhD* *Louisiana Tech University*	**US Composite Pipe Polymer Concrete Structures** *Andy Brown* *D&W Systems and Sales*
2:30 pm - 3:00 pm	**Break in the Exhibit Area**	
3:00 pm – 4:00 pm	***TBD***	***Sanitary Sewer Trenchless Rehabilitation*** *Spencer Tuell, PE* Gulf Coast Underground
4:00 pm - 4:50 pm	***TBD***	***Shreveport's Consent Decree and the Trenchless Technology Program*** *Tyler Comeaux, PE* *Burk-Kleinpeter, Inc.*
4:50 pm – 6:00 pm	**Evening Meeting and Greet**	
Conference Agenda Friday, April 29, 2016		
8:00 am	**Exhibit Area Opens**	
8:00 am – 9:00 am	***Raise the Bar*** *Tony Puntin, PE*	**TTC – Supporting the New ASCE Utility Engineering & Surveying Institute** *Tom Isley, PhD* Louisiana Tech University
9:00 am - 9:50 am	***TBD***	***TBD***
9:50 am - 10:10 am	**Break in the Exhibit Area**	
10:10 am - 11:00 am	***The Red River Flood of 2015*** *Ali Mustapha, PE* *Caddo Levee District*	***TBD***
11:00 am - 11:10 am	**Break in the Exhibit Area**	**Break in the Exhibit Area**
11:10 am - 12:00 am	***TBD***	***TBD***
12:00am - 1:30 pm	**Luncheon and Section General Membership Meeting**	
1:30 pm - 3:30 pm	**Section Board of Directors Meeting - Conference Room**	

Rev. January 18, 2016

SPONSOR / EXHIBITOR FORM
LOUISIANA SECTION
SPRING CONFERENCE- 2016
APRIL 28-29, 2016
SHREVEPORT CONVENTION CENTER • SHREVEPORT, LOUISIANA
Hosted by the Shreveport Branch – ASCE

SPONSORSHIP TYPE	NO.	COST	SUB-TOTAL
GOLD SPONSOR Includes sponsorship recognition at meal, break, or session room of choice (first come, first serve), recognition on registration page, and program recognition	_____	@$500.00 =	$ _____
SILVER SPONSOR Includes recognition on registration page and program recognition	_____	@$300.00 =	$ _____
BRONZE SPONSOR Includes program recognition	_____	@$175.00 =	$ _____

EXHIBITOR PACKAGE			
Exhibitors will receive an 8' X 10' area with a table, two chairs, and drapes. Registrants may be included in the package for an additional charge as shown. Additional resources available upon request (fees may apply; see below). Donation of door prizes would be appreciated.	_____	@$400.00 = (No Registrants)	$ _____
	_____	'@$500.00 = (1 Registrant)	$ _____
	_____	'@$600.00 = (2 Registrants)	$ _____
* Please list if additional resources are needed - power, etc. (May be subject to additional costs)	Additional Resources: _____		

ADDITIONAL ATTENDEES			
Thursday Banquet Lunch	_____	@$25.00 =	$ _____
Friday Lunch	_____	@$20.00 =	$ _____

TOTAL AMOUNT REMITTED $ _____

NAME: _____ WORK PH: (_____) _____

COMPANY: _____

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PLEASE MAKE CHECKS PAYABLE TO: **ASCE Shreveport Branch**

ASCE Shreveport Branch
2016 Spring Conference
P.O. Box 3994
Shreveport, LA 71133

For questions concerning sponsorship or exhibits contact
Mitch Guy at 318-674-9616 or by e-mail at mguy@cdg-apec.com

REGISTRATION FORM

2016 Annual ASCE Louisiana Section Spring Meeting & Conference

APRIL 28-29, 2016

Shreveport Convention Center

Registration Fees*:	No.	Cost	Total
Registration Fee – Member by April 13, 2016	___	@$200.00	$_____
Registration Fee – Member after April 13, 2016	___	@$225.00	$_____
Registration Fee – Non-member by April 13, 2016	___	@$250.00	$_____
Registration Fee – Non-member after April 13, 2016	___	@$275.00	$_____
Student Registration Free	___	No Cost	$_____
Award Banquet Luncheon Admission** (Thursday):			
General Admission	___	$25.00 each	$_____
Life Member Honoree and Guest & Conference Registrants	___	no charge	
Award Recipient and a guest	___	no charge	
Student Admission	___	no charge	
Luncheon Admissions (Friday):			
Conference Registrant	___	no charge	
General Admission Luncheon	___	$20.00 each	$_____
Student Admission	___	no charge	

TOTAL PAYMENT ENCLOSED: **$**_____

*Registration Fee includes Thursday & Friday luncheon, and admission to exhibits and technical sessions. Military & Government Employees will be charged members fees.
**Dinner fees have not been finalized and are subject to change.

Name: _____ Branch: _____

Spouse's / Date's Name (if attending banquet or a luncheon): _____

Company Name: _____ ASCE Member No: _____

Address: _____ City, St, Zip: _____

Phone: _____ Fax: _____ E-mail: _____

Please make checks payable to **ASCE - Shreveport Branch** and mail with form to:

ASCE – 2016 Conference
Post Office Box 3994
Shreveport, LA 71133

Thursday evening Meet and Greet: Two complimentary drinks to registrants and cash bar.

Registration and Information: To register or obtain additional information by phone or e-mail, please contact Mitch Guy at (318) 674-9616 or at mguy@cdg-apec.com. ***Online Registration to Members Coming Soon.***

Overnight Accommodations: For overnight accommodations at least by April 13, please visit the conference reservation ***link below*** to make reservations at the Hilton Shreveport. $129.00/ night.

https://resweb.passkey.com/go/AmSocietyofCivilEngineers

Geotechnical Instrumentation for Construction Monitoring

By Malay Ghose-Hajra, PhD, PE, ENV SP

Malay Ghose-Hajra, PhD, PE, ENV SP

INTRODUCTION:

Geotechnical engineering is the branch of Civil Engineering that involves evaluation of engineering properties of soil and rock and their interaction with the structures they support. Unlike design of concrete or steel structures, where most material properties are specified and manufacturing is controlled, mineralogical composition, particle arrangement, and engineering properties of soil and rock can vary significantly in the vertical and horizontal directions within a short distance. Depending upon the natural processes of geologic formation, previous stress history at the project site, and activities at an adjoining property, the Geotechnical Engineers of design are often challenged with a wide variety of naturally occurring heterogeneous materials below ground and several unknown parameters that needs to be accounted for in their analysis and design recommendations.

BENEFITS OF GEOTECHNICAL INSTRUMENTATION:

Different geotechnical instruments, placed within the soil mass or at soil/structure interface, can provide the Geotechnical Engineers with important data in every stage of a construction project. Instruments can be used to characterize initial site conditions and determine in situ soil and rock properties during the design phase. Soil parameters commonly investigated during this phase include soil permeability, pore-water pressure, soil strength and compressibility. Additionally, geotechnical instruments can be used during and after construction to verify design assumptions and monitor field performance of a geotechnical feature. Soil parameters commonly monitored during this phase include pore water pressure, stresses within soil and rock, vertical and lateral deformation, as well as load and strain in structural members. Following are some benefits of incorporating Geotechnical instrumentation in a project:

- *Design verification*: Instruments can be used to verify design assumptions and to check the performance of a geotechnical feature, as estimated during the design phase of the project. Critical data gathered from properly executed instrumentation program can assist the designer to choose cost effective foundation solutions thereby saving money and time.

- *Reveal unknowns and aid use of observational method*: Geotechnical engineers design projects within naturally occurring heterogeneous materials below ground using several unknown parameters. Instruments, strategically placed below ground surface to monitor critical subsurface parameters, can provide the engineers with valuable data to measure the actual performance of the design against uncertain subsurface soil conditions.

- *Provide warning against impending failure*: Failure of geotechnical features, resulting from excessive loads, design mistakes, varying subsurface soil conditions, or construction errors, can lead to tragic consequences to life and property. Geotechnical instrumentation can be used to monitor performance and provide warning signals prior to the commencement of failure. A good instrumentation program may reveal previously-unknown conditions early enough such that modifications can be made to reduce the risk of unexpected failure of the project or structure.

- *Minimize damage to adjacent structures*: Sometimes geotechnical construction can have adverse consequences that can negatively affect adjacent structures. Monitoring instruments can provide data at an early stage on performance of adjacent buildings due to the construction activities. This can help the engineer change or modify construction methods or procedures to avoid or minimize damage to those facilities.

- *Devise remedial methods to fix problems during construction*: Data from geotechnical instrumentation can help the engineers determine what caused a problem during construction. This will assist in developing remedial actions to address the specific issue.

- *Quality Control*: Instrumentation can be used to monitor the quality of workmanship as well as progress of construction activities. This will help the engineers ensure that work was done in accordance with design specifications.

- *Reduce Litigation and legal protection*: Data obtained from instruments can provide evidence for a legal defense of designers and contractors in a court of law.

- *Advance State-of-knowledge*: Many theories in Soil Mechanics were developed based on data from geotechnical instrumentation on full-scale projects. Instrumentation to advance state of knowledge can save money and resources by improvement in geotechnical design and construction methods.

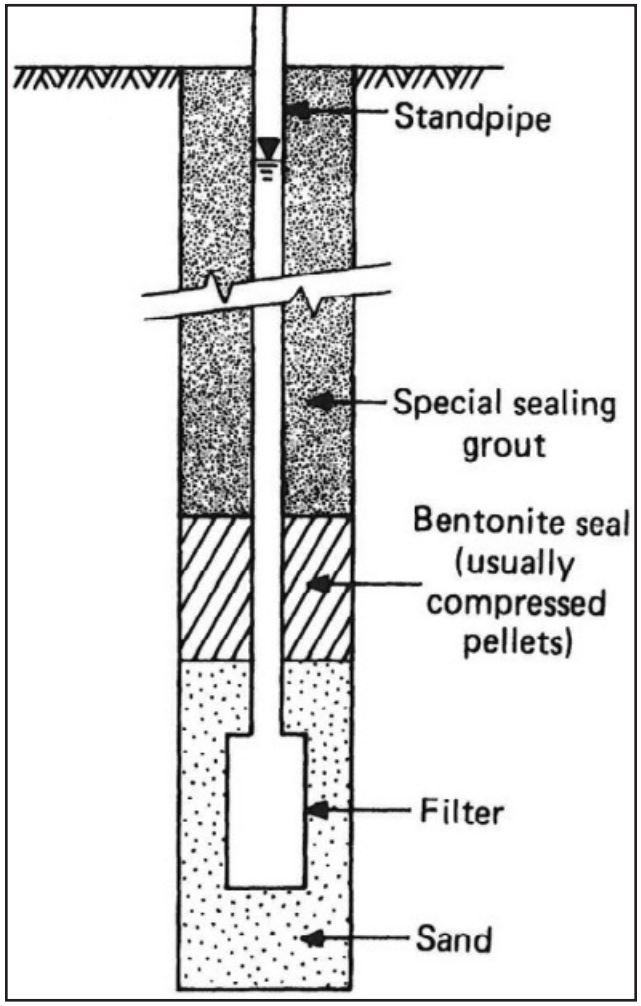
- *In-service performance monitoring*: Instruments can be used to monitor the performance of a structure or geotechnical feature during its design life. Data obtained from instruments can be monitored and analyzed on a regular basis to provide successful performance indication of the project.

SELECTION OF INSTRUMENTS:

Selection of geotechnical instruments will vary between projects. Each project has different subsurface conditions and different risks associated with construction activities. Furthermore, each project presents a unique set of critical parameters (pore water pressure, deformation, tilt, total stress, load and strain, temperature etc.) that need to be monitored. Therefore, selection of the right type of instruments for a project will depend upon (i) critical parameters to be monitored, (ii) complementary parameters to be monitored, (iii) Subsurface soil conditions, (iv) environmental conditions such as temperature and humidity, (v) intended instrument life, (vi) desired quality and performance characteristics of the instruments, (vii) Availability of resources and training of personnel, and (vii) desired data acquisition method (manual or remote).

EXAMPLES OF GEOTECHNICAL INSTRUMENTATION:

Several instruments can be used before, during, and after geotechnical construction to verify design assumptions and monitor field performance of a project. Parameters commonly monitored in geotechnical projects include pore water pressure, stresses within soil and rock, vertical and lateral deformation, as well as load and strain in structural members. The following paragraphs provide examples of geotechnical instrumentation commonly used in practice:

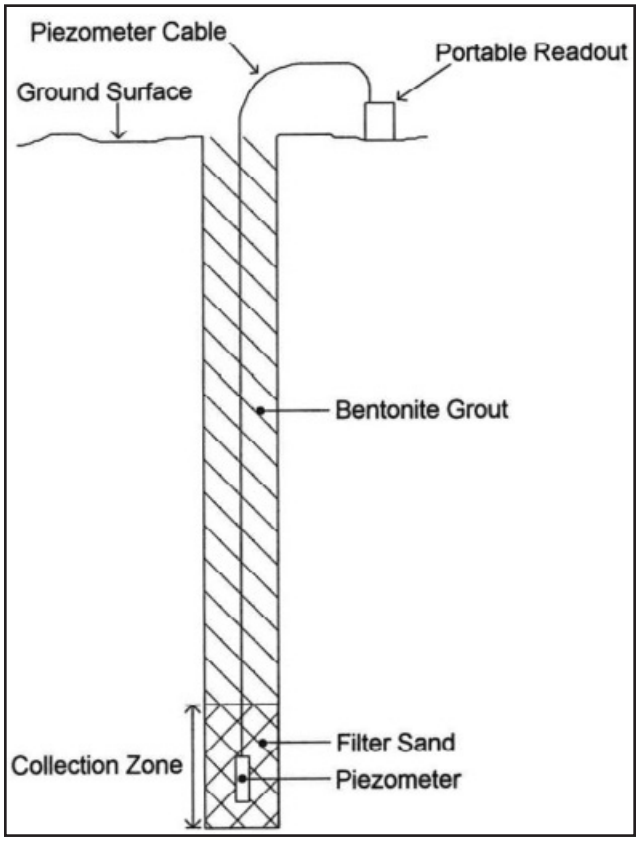


Schematic of Open Standpipe Piezometer installed in a borehole (source: Dunnicliff, 1993)

- ***Pore water pressure measurement*:** Measurement of pore water pressure is helpful to establish initial site conditions, design and build for uplift pressures, plan and evaluate for lateral earth pressures, calculate forces acting on a slope, as well as monitor performance of a dewatering system. Pore-water pressure measurements have applications in embankment construction on soft soils (monitor consolidation, placement of surcharge fill), retaining walls and diaphragm walls (applied load, monitor draw-down due to dewatering, monitor uplift pressures at bottom of excavation), natural and man-made slopes (applied load, effective shear strength of soil), and pile load tests (increase and dissipation of excess pore-water pressure).

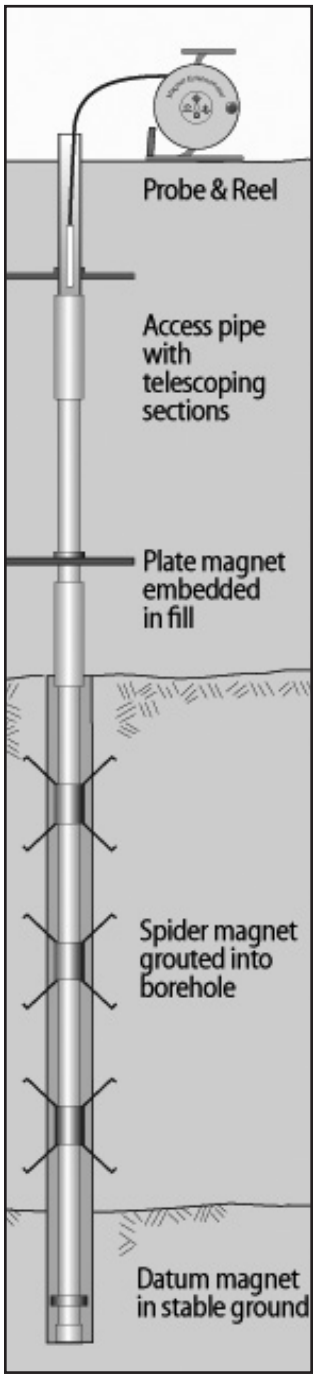
To monitor pore water pressure, the following instruments/ systems are generally used:

i) Observation Well
ii) Open Standpipe piezometer
iii) Pneumatic piezometer
iv) Vibrating wire piezometer



Vibrating wire piezometer (source: Geokon)

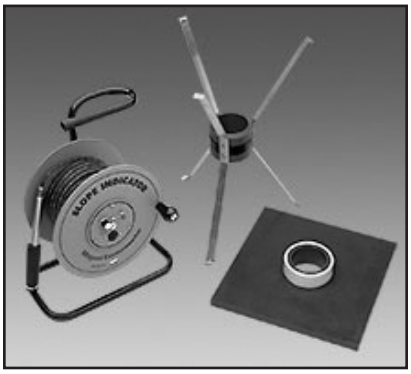
- ***Vertical Deformation**:* Measurement of vertical deformation is useful to verify the consolidation of soft soil under applied structural and non-structural loads, verify performance of engineered foundations, and predict final elevation of an embankment constructed on soft soil. Vertical deformation measurements have applications in embankment construction on soft soils (monitor progress of consolidation of foundation soil, monitor performance of foundation soil), excavation (monitor heave at bottom of excavation), foundations on soft soils (settlement of ground storage tanks), structures (differential settlement measurement due to nearby excavations or dewatering), and pile load tests (monitor compression of pile and settlement below pile tip).

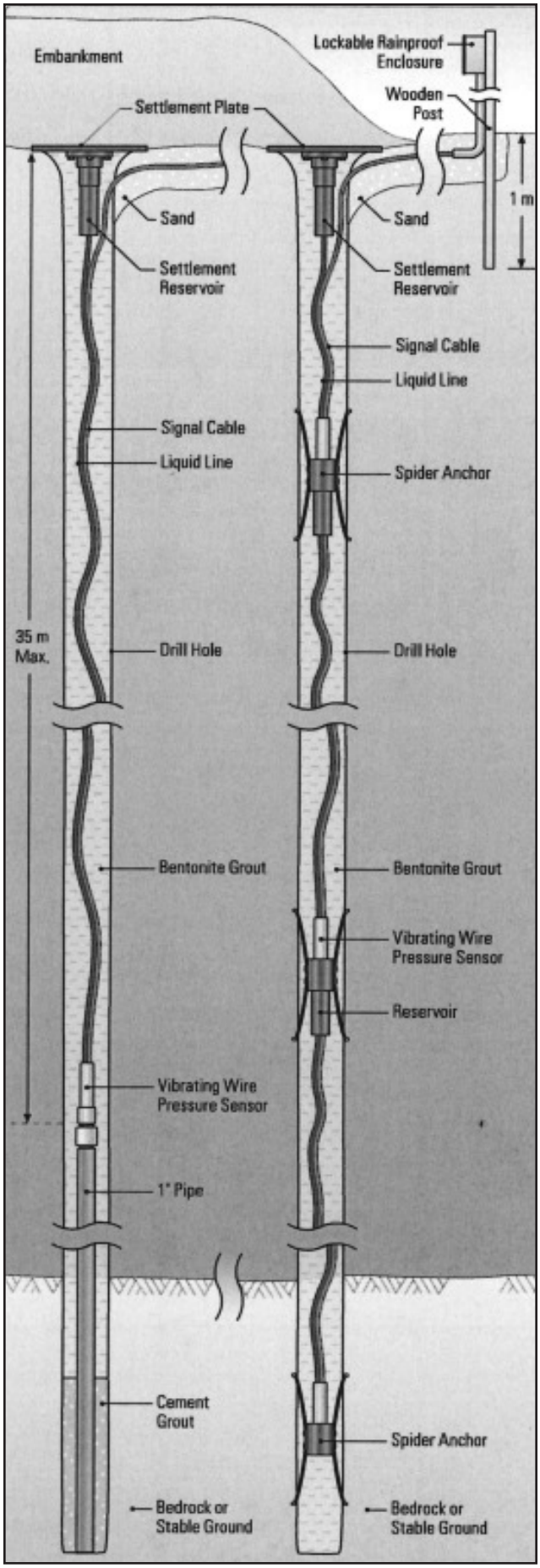


Magnet Extensometer (source: Slope Indicator)

The following instruments are generally used to monitor vertical deformation:

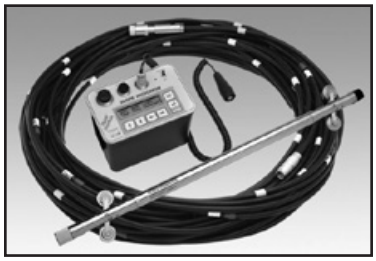
i) Settlement Cells
ii) Magnet or Rod Extensometer
iii) Sondex
iv) ShapeAccelArray (SAA)

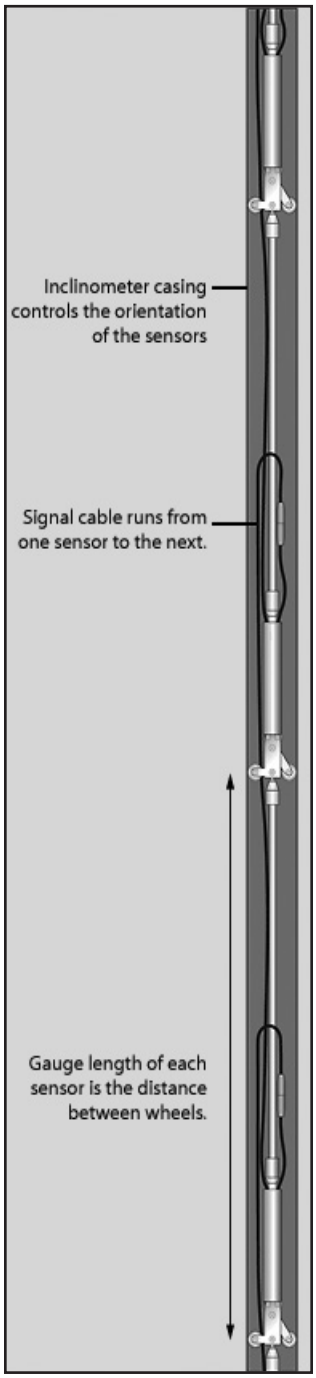




Vibrating wire settlement system (source: Geokon)

- ***Lateral Deformation***: Measurement of lateral deformation is useful to evaluate the stability of slopes and embankments, and verify performance and safety of structures such as retaining walls and embankments. Lateral deformation measurements have application in landslides and embankments (monitor stability of slopes and embankments, detect shear failure surfaces, monitor rate of movement), retaining walls (monitor deformation of retained soil), rock slides (monitor magnitude and rate of rock movement), and pile load tests (monitor deformation of laterally loaded piles).

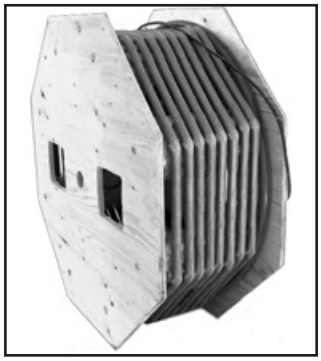


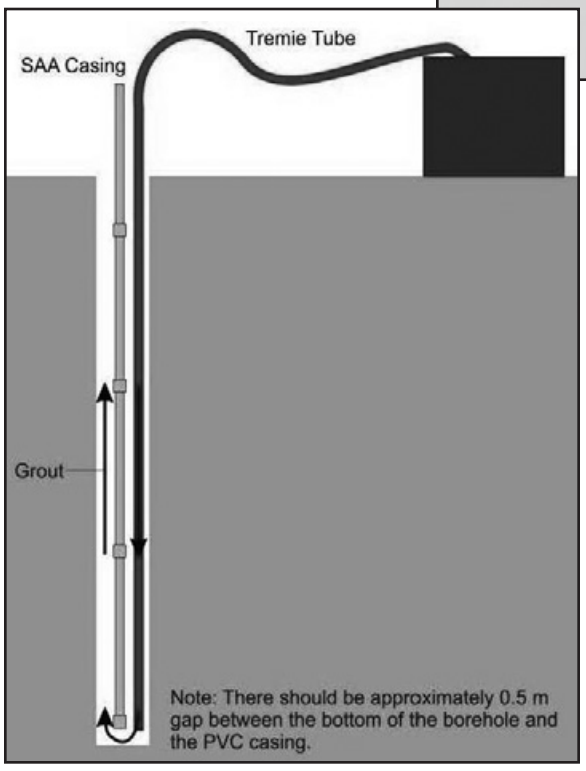


In Place inclinometer system (source: Geokon)

The following instruments are generally used to monitor lateral deformation:

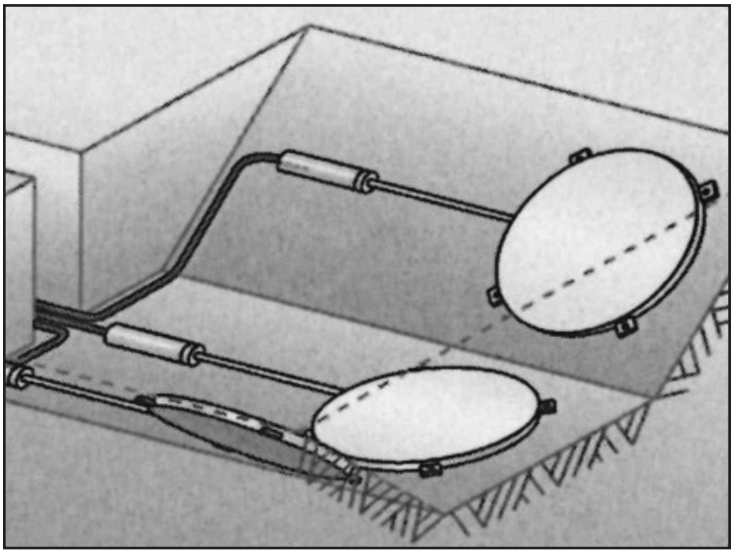
i) Inclinometers
ii) ShapeAccelArray (SAA)



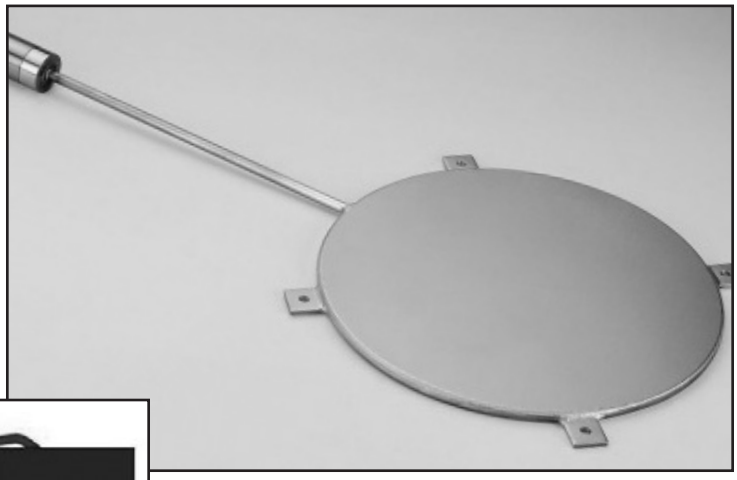


ShapeAccelArray (SAA) System (source: Measurand)

- ***Total Stress in Soil***: Measurement of total stress in soil and rock is useful to evaluate stability and performance of structures founded on them. The total stress can be measured within a soil mass or at the face of a structural element. The effective stress in soil can then be determined by subtracting the pore water pressure from the total stress in soil. Total stress measurements in soil have application in earthen fills, embankments, slurry wall excavations, and pile foundations.



Earth pressure cells installed in fill for soil stress measurement in three directions (source: Geokon)



Photograph of Earth Pressure Cell (source: Geokon)

The following instruments are generally used to monitor total stress in soil:

i) Embedment or Contact Earth pressure cells
ii) Jackout Pressure cells
iii) Push-in Pressure cells
iv) Pile tip pressure cells

DATA ACQUISITION, TRANSMISSION, AND ANALYSIS:

Responsibility for collection and interpretation of instrumentation data is generally determined during the planning stages of the project. The data collected by the geotechnical instruments can be assessed, and recorded in person at the job site at a regular interval determined by the responsible parties. Alternatively, the data can be collected and transmitted remotely by means of wireless modem and satellite connection. The instrumentation data is generally analyzed by the project engineer to evaluate and monitor the performance of a geotechnical feature during and after the completion of construction activities.

Manual measurement of inclinometer system (source: google images)

Wireless transmission of data from instruments (source: google images)

SUMMARY:

Geotechnical engineering is the branch of Civil Engineering that involves evaluation of engineering properties of soil and rock and their interaction with the structures they support. Depending upon the natural processes of geologic formation, previous stress history at the project site, and activities at adjoining properties, the Geotechnical Engineers of design are often challenged with a wide variety of naturally occurring heterogeneous materials below ground and several unknown parameters that need to be accounted for in their analysis and design recommendations. Adequate instrumentation of Geotechnical features can provide engineers will valuable performance benchmarks during every stage of a project. Data from strategically placed instruments can be used to characterize initial subsurface site conditions, verify design assumptions, provide data for use in quality control during construction, minimize damage to adjacent structures, monitor field performance of critical project features, as well as give early warning of impending failures, thus saving valuable property, life and project cost. With recent advancement in data collection systems using wireless modem and satellite connection, data from geotechnical instruments can be collected, processed, and transmitted in real time.

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Durham Geo Slope Indicator (www.slopeindicator.com)

Geokon, Inc. (www.geokon.com)

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ASCE-COPRI Louisiana Chapter News

By Erin Rooney, PE, Director - Communications

COPRI
COAST, OCEANS, PORTS AND RIVERS INSTITUTE
Louisiana Chapter

The Louisiana Chapter of the American Society of Civil Engineers (ASCE) Coasts, Oceans, Ports, and Rivers Institute (L.COPRI) is continuing to promote membership and visibility throughout the State of Louisiana by conducting joint seminars with local Branches and State Sections of ASCE.

L.COPRI Fall Seminar

L.COPRI held their fall seminar on December 10, 2015 at the Lod Cook Conference Center in Baton Rouge with 62 people attending. Presentations and panels were presented on the four COPRI topics: Coasts, Oceans, Ports, and Rivers. Jerry Carroll and Maury Chatellier spoke on Mississippi River Sediment Diversions: Summary of Ongoing Planning Efforts and Overview of Path Forward. R.B. Smith presented information about Southwest Louisiana Projects Report and Economic Forecast. A summary of the Gulf of Mexico Deepwater Oil and Gas Exploration and Technology was provided by Eric Smith. The day continued with a panel discussion on advances in marsh creation design and construction with input from panelists Russ Joffrion, Rudy Simoneaux, John Foret, and Mitch Andrus. Chris Knotts with LAPELS then gave a presentation on Engineering Ethics to wrap up the day.

L.COPRI Scholarship 2015

The Louisiana COPRI chapter has an active young member group. To encourage graduate and undergraduate students in Louisiana, the executive committee unanimously agreed to award a scholarship of $1,000 (one time annually) to an eligible candidate based on academic achievements, community involvement and their contributions towards coasts, oceans, ports and rivers. The students were eligible to apply if they met the following requirements:

1. Be a graduate or undergraduate student in Civil, Coastal or Environmental engineering in Louisiana
2. Be in good academic standing with the College of Engineering
3. Must have a minimum 2.5 overall GPA
4. Must be a member of a student professional organization.

Cody Johnson (right) accepting the 2015 Louisiana COPRI Scholarship from L.COPRI President Rudy Simoneaux (Left)

The committee received an overwhelming response from both graduate and undergraduate students. Out of all the well qualified students, Cody Johnson was awarded L.COPRI annual scholarship at the COPRI fall seminar held in Baton Rouge on December 10, 2015. Mr. Johnson is a graduate student at Louisiana State University with a Coastal and Ecological Engineering major. His research is focused on storm surge protection, sediment transport, and shoreline restoration around coastal Louisiana. With an outstanding GPA and real time experience working as an intern with the Louisiana Coastal Protection and Restoration Authority, he shows a strong commitment in helping coastal Louisiana.

P3 for Waterways Infrastructure Symposium – New York

National COPRI's P3 for Waterways Infrastructure Subcommittee conducted a technical workshop in New York, NY on Friday, January 22, 2016 on Public-Private-Partnerships (P3) for Waterways Infrastructure. The day long symposium is sponsored by ASCE National and was coordinated by the Metropolitan Section Chapter of COPRI. This special event featured presentations and panel discussions by industry leaders, including key U.S. Army Corps of Engineers staff, ASCE, and the finance and engineering private sectors. ASCE COPRI's national Waterways Committee established the P3 for Waterways Infrastructure Subcommittee, chaired by the Secretary of L.COPRI Dennis Lambert, with the goals to educate,

continued on next page

ASCE-COPRI Louisiana Chapter News, continued from page 19

advocate and facilitate. The committee includes representatives from consulting firms, port authorities, USACE, AAPA, the Waterways Council, Inc. and others. P3 was authorized under WRRDA 2014.

PORTS '16 Student Competition

COPRI is hosting a student paper competition for undergraduate and masters students for the upcoming PORTS '16 Conference. The competition is open to all undergraduate and masters students. Paper topics include: coastal, environmental, general-civil, geotechnical, ocean, structural and transportation engineering. The paper can be part of a class project or graduation requirement. Submissions are due March 25, 2016.

Top Four Students from Each Category will receive:

- Free conference registration, hotel stay for 3 nights in New Orleans, and a $500 travel stipend
- Cash prizes for First and Second place papers
- Your name published in the conference program as a student award-winner
- Optional publication in the electronic conference proceedings after the conference
- Networking opportunities with students, young professionals, and experienced professionals
- Access to the exhibit hall, where you can connect with industry leaders

PORTS '16 Conference – New Orleans

Registration is opening soon for The PORTS '16 Conference in New Orleans, LA. The conference will be held June 12-15, 2016 at the New Orleans Marriott with the theme of "PORTS: Gateways to a World of Opportunities". It will include 45 Technical Sessions; 8 broad-ranging, practice oriented Short Courses; a full Exhibit Hall featuring the latest developments in port and coastal engineering, maritime construction, ground treatment technologies, and a variety of port applications.

The Opening Plenary will feature Dr. Robert Ballard, recipient of the ACEC Distinguished Award for Merit in 2015. Dr. Ballard is among the most accomplished and well known of the world's deep-sea explorers. He is best known for his historic discoveries of hydrothermal vents, the sunken R.M.S. Titanic, and the German battleship Bismarck.

Sponsorship and Exhibitor opportunities are currently available; please contact Sean Scully (sscully@asce.org) with any questions about available options. The PORTS Conference series is internationally recognized as an outstanding opportunity to network with hundreds of practitioners, researchers, and specialists at the leading edge of the port engineering profession. For the most up-to-date information, please visit http://www.portsconference.org/.

Other Information

For more information on all COPRI conferences, please visit http://www.asce.org/coasts-oceans-ports-and-rivers-engineering/coastal-engineering-conferences-and-events/.

The activities of L.COPRI will include seminars, workshops and other activities to benefit all ASCE and COPRI members. One does not have to be an Engineer to join COPRI. These Institutes are formed for the benefit of ASCE and non-ASCE members to participate and interact with other professionals interested in coastal, oceans, ports, and riverine efforts in Louisiana. If you have any questions or to add your name to our mailing list, please contact Erin Rooney, at LCOPRI@yahoo.com.

CALLING ALL FUTURE AND CURRENT LEADERS IN ASCE – YOUR HELP IS NEEDED FOR THE 2017 REPORT CARD FOR LOUISIANA'S INFRASTRUCTURE"

ASCE | GOVERNMENT RELATIONS

In 2012, Louisiana ASCE released its first infrastructure report card. The document has become an important centerpiece of Louisiana's infrastructure debate reaching newspapers across the country, our state legislators and elected officials, and our governor. The effort received accolades from our national ASCE peers and has become sort of a gold standard for report cards for other states.

The time has come again to serve our membership, the public, and our elected leaders with an updated report called the 2017 Report Card for Louisiana's Infrastructure. This report will be released five years following the original report fulfilling the intentions made by the original report card committee and the Louisiana ASCE Government Relations Committee to continue this priority on a five-year cycle.

We are seeking the following important roles:

1. Report Card Executive and Deputy Director
2. Report Card Committee Chairs for nine infrastructure topics (Roads, Bridges, Ports, Aviation, Levees, Drinking Water, Wastewater, Hazardous Waste, and Dams), as well as one new category for Coastal infrastructure
3. Report Card Research and Technical support positions for the topics stated
4. General administrative support such as public relations, editing, and graphics

Please contact nedrasuedavis@gmail.com if you would like to participate!!

ASCE-T&DI Louisiana Chapter News

By Joffrey Easley, PE - Newsletter Editor

2015-2016 Scholarship Recipients

T&DI has once again awarded two $500 scholarships to deserving junior and senior university students that intend to pursue a career in the field of transportation. Students that meet the scholarship criteria are required to provide a transcript along with two academic recommendations, as well as an essay regarding their interest in transportation studies, to their advisers early in the Fall semester. The applications are then reviewed by a subcommittee composed of Dr. Louay Mohammad, Om Dixit, PE, and Dan Aucutt, PE, who determine the scholarship recipients.

Breanna Bell

Amanda Jackson

The recipients of the 2015-2016 T&DI Scholarship are Ms. Breanna Bell and Ms. Amanda Jackson. Ms. Bell is pursuing a BS in Civil Engineering from LSU, as well as a BS in Physics from Xavier University and Ms. Jackson is in her third year of the Civil Engineering degree program at LSU. Each of the scholarship recipients received a $500 stipend, which was sent to their respective engineering departments for distribution. Congratulations to the 2015-2016 recipients on this accomplishment!

Upcoming Seminars

The T&DI Louisiana Chapter is finalizing the date to host a seminar at the TTEC Auditorium on LSU's campus to discuss the existing ITS infrastructure in Baton Rouge, as well as some planned improvement projects. The seminar will also present on-going research on connected vehicles that is taking place using the LSU Department of Civil and Environmental Engineering Driving Simulator. Be on the look-out for an announcement with the date for this seminar.

There are also plans to host a seminar in April or May on Mechanistic-Empirical (ME) Pavement design. This seminar will likely be held at the UNO campus in New Orleans. Check your in-box for an announcement once the date is finalized.

Louisiana State Science and Engineering Fair

T&DI will again be participating in the Louisiana State Science and Engineering Fair. The event will take place March 22nd and 23rd at the LSU Student Union Royal Cotillion Ballroom in Baton Rouge. As in past years, members of T&DI will serve as judges and present awards to the students with the top transportation and development projects. The Science Fair is always on the lookout for new judges, so if you or anyone you know is interested in being a judge, contact Ray LePine, the Chair of the Judging Committee, at rlepine@lsu.edu for additional information.

Looking Ahead

The intent of T&DI is to promote transportation and development as a career path, and to provide training and networking opportunities for all professionals involved in transportation projects. If you are interested in co-sponsoring a seminar at your branch, the T&DI Louisiana Chapter has prepared a Seminar Coordinator's Check List to assist you in your preparation. Contact Ronald Schumann, Jr., PE, at ronald.l.schumann@aecom.com for a copy of the checklist. Our seminars are two hours in length and are typically presented from 5:30-7:30 pm in either the New Orleans or Baton Rouge area. We have also presented out-reach seminars with the ASCE Acadiana Branch and Shreveport Branch. We are open to co-hosting seminars in additional Louisiana cities if requested. In keeping with the intent of the Institute to provide training and networking opportunities for all professionals involved in transportation projects, in addition to the upcoming seminars listed above, the Chapter is also planning the following future seminars:

- Mitigation Banking – NEPA Method
- Sustainable Rating System for Public Works Projects
- Complete Streets from the Users Point of View
- Pavement Engineering (Part 3 of 3) Application of Earthwork and Embankment Materials

ACADIANA BRANCH

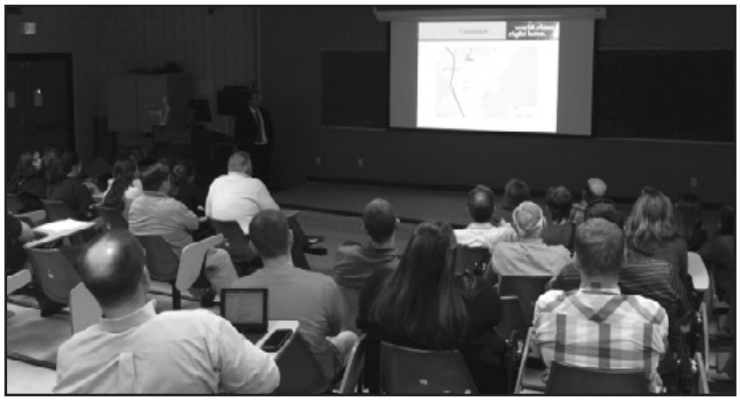
By Garland Pennison, PE, Branch President

At the October Luncheon, new officers were inducted for the ASCE Acadiana Branch. Officers shown below from left to right are: Jared Veazey, Secretary; Garland Pennison, President; Beau Tate, Past-President; Sarah Richard, President-Elect; and Sasan Daneshvar, Treasurer.

At the October luncheon, Jessica Cornay of the Lafayette Consolidated Government (LCG) presented on the new Unified Development Code (UDC) adopted by LCG. The new design standards and codes are now in effect. From now on, new design and inspection for street and drainage improvements in Lafayette Parish will require engineers to comply and provide certified inspection.

During the event, the ASCE Acadiana Branch was honored to hand out four scholarships, two to University of Louisiana at Lafayette (ULL) students and two to McNeese University students. The awardees were Katherine Ann Forman and Jacob Alex Neu of ULL and Nicoleta Maria Muresan and Tory Miller of McNeese.

At the November meeting, the University of Louisiana at Lafayette assisted the ASCE Acadiana Branch by hosting two presentations. The first presentation, by Stephen Wallace, PE with Stantec, was on the I-49 Connector through Lafayette, and the second presentation, by Daniel Elsea with the Lafayette Regional Airport, focused on the airport's Master Plan. These presentations were a great opportunity for both professionals and students to attend. Since these projects are in the Acadiana area, students had the chance to be informed about two real-world projects that are being performed locally. Attendees were also provided a great meal after the presentations.



Additionally, the Acadiana Branch invited all engineering firms to submit articles on their ongoing or recently completed projects, to be included in the monthly newsletters. Since the invitation, the projects in spotlight include: the "U.S. 90 (I-49 South) Albertson Parkway to Ambassador Caffery Design Build" by Dax Duet, PE of C. H. Fenstermaker & Associates, LLC and the "Repair of Morganza Spillway Bridge Bent Pile Cap Using Carbon Fiber Reinforcement (CFR)" by Vijava Gopu, PhD, PE. You can get in touch with the Acadiana Branch: PO Box 60805, Lafayette, LA 70596; asceacadiana@outlook.com.

SHREVEPORT BRANCH

By Chris Myers, PE, Branch President

This year the Shreveport Branch will host the 2016 ASCE Louisiana Spring Conference:

Date: April 28-29, 2016.
Location: Shreveport Convention Center, 400 Caddo Street, Shreveport, LA 71101
Hotel: Hilton Shreveport, 104 Market Street, Shreveport 71101
Please see the details on registration, speakers, and rates on page 13.

Mitch Guy, past-president of Shreveport Branch, has taken lead point for this conference by serving as Conference Chairman. If you would like to be a speaker or know someone who would, please email your contact information to: ASCE.Shreveport@gmail.com.

I would like to thank Sean Diel from Industrial Coatings & Corrosion Protection for presenting at the November meeting. The presentation was well received and I had a lot of great feedback all around. The Shreveport Branch also co-sponsored with the Southeast Society of Trenchless Technology (SESTT) on a Trenchless Technology Seminar at Louisiana Tech University, Shreveport Center on December 16 & 17, 2015; a total of 10 PDHs was offered at the seminar. Lastly, the Shreveport Branch had its end of the year Christmas Party at Superior's Steakhouse which was very spirited and celebrated.

If you would like more information about our Branch please send us an email at ASCE.Shreveport@gmail.com and we will forward you our monthly newsletter that includes the latest events.

BATON ROUGE BRANCH

By Danielle Welborn, PE, Branch President

I hope you had a wonderful holiday with your family and friends! As the door closes on 2015, we look back at what a wonderful year it was and we anxiously await an exciting 2016!

2015 was full of informative luncheons, an exceptional Spring Conference, and a very merry Christmas Party at Bocage Racquet Club. We also completed the second chapter of the *Engineer It!* workshop at Louisiana Art and Science Museum, called *Water Works*. Thank you to **Jeff Duplantis**, **James Thomas**, **Sparkle Noble,** and **Theresa Kelly-Brown** for contributing their time and talents to teaching the children about water filtration. We look forward to the next workshop beginning in February 2016 called *Dig It!* This workshop will be focused on the geotechnical field of engineering. Children ages 6 to 12 will learn the basics of geotechnical engineering and design, participate in soil analysis using a real sieve, and conduct an Atterberg Limits test, along with other fun activities. Thank you to **Mike Juneau** for accepting the responsibility of developing this next chapter and contributing his ideas and materials to the program. We strongly encourage our members to bring their children, grandchildren, nieces, and nephews to participate in the workshop. The first workshop is Saturday, February 20 @ 11:00 am and continues at the same time on the 3rd Saturday of each month through June. A HUGE thank you to **Joey Coco** for his continued involvement and great concepts to keep this program going and growing. More information can be found at www.lasm.org.

In December, we were informed that the State Public Affairs Grant (SPAG) proposal that the Baton Rouge Branch and Louisiana Section's Government Relations Committee jointly submitted was accepted. We will receive $3000 to call attention to Louisiana's infrastructure funding shortfall on a billboard by relating a family's annual expenses to the amount they pay in state gas taxes. The billboard will be strategically located in Baton Rouge. The proposal can be found on the Branch's website. Thank you to **Blake Roussel** for his hard work in preparing the proposal!

In 2016, we have planned many exciting events and scheduled impressive speakers for the luncheons. To kick off the year, we will hear from **Dr. John Pardue** about *Bioremediation: Moving from Laboratory Experience to Field Results* at our January luncheon at Drusilla (January 21). The next month, we will celebrate Engineer's Week at Louisiana Engineering Society's annual banquet at Juban's (February 25). At the banquet, we will present a deserving engineering student with a $1000 scholarship so we would love for our members to show their support by attending the banquet. In the early spring, we will be participating in a service project funded by *The Lauren Savoy Olinde Foundation*. This foundation works with schools and parks to add shade to playgrounds so children are protected from the sun's harmful ultraviolet rays. We will assist in the construction of a playground and the shade {more information to come}. In March, we plan on having an ethics topic to fulfill your ethics PDH requirement prior to the March 31 renewal (March 17). Also in March, we will be teaming up with LSU's and Southern's student chapters to help organize a career fair at LSU. This career fair has been very successful for the students and companies that have participated in the past. We encourage local engineering firms to come showcase their company and meet our future engineers {more information to come}. In April, **Mr. Gary Pentek** and **Mr. Bill King** will be speaking about DOTD's Off System Bridge Program and Bridge Rating Process. We always look forward to the joint luncheons with LES in May and August. In May, LES will host the luncheon at Juban's and in August, ASCE will host the luncheon at Drusilla.

We are thrilled and honored to have the 2016 President-Elect for the National ASCE, **Norma Jean Mattei**, come to speak at our luncheon in June (June 16). We will also be recognizing and celebrating our Past Presidents so this will be a very special luncheon.

We hope that you are as excited about these upcoming events as we are! The 2015-2016 Board has been diligently working to bring you a diverse line up of speakers and interesting new opportunities but we are always open to suggestions for luncheon topics, speakers, and group activities. We welcome your comments and suggestions!

Thank you for allowing me to serve as your President for 2015-2016. With open arms, we welcome 2016!

NEW ORLEANS BRANCH

By Wesley Eustis, PE, Branch President

In November the New Orleans Branch hosted a luncheon presentation by Ram Jack Foundation repair. Ram Jack showcased their helical pile system and provided information on where this type of system would be most useful to our local engineering community.

Later in the month our Younger Member Chair Andrew Woodroof hosted a Social and Financial Planning Event for our Younger Members group. The event included a short presentation by Mr. Andrew Hill of Merrill Lynch and also provided our younger members some time to sit and speak with Mr. Hill on any specific financial questions they may have had.

In December, the New Orleans Branch hosted Dr. Emir Macari, Dean of UNO Engineering. Dr. Macari gave our branch a brief overview of the UNO Coastal Engineering Program. He also gave a presentation on the future use of the electric smart grid system and how climate change affects energy production.

Our branch will continue its monthly luncheons in 2016 with presentations from Building & Earth Sciences, Inc. on Special Inspections in January as well as Attorney Keith Bergeron giving a presentation on appearing before a licensing board in February.

ASCE-SEI New Orleans Chapter News

By Om Dixit, PE, FASCE, F-SEI

STRUCTURAL ENGINEERING INSTITUTE
New Orleans Chapter

The ASCE SEI New Orleans Chapter has been busy in planning seminars and workshops for 2016. The emails for the seminar will follow soon. The future seminars include Simplified Seismic Design for Louisiana, Embedded Anchor Design, Steel Design-Connections/ joints and many more.

SEI-NO is planning to participate in sponsoring the Annual Regional MathCount competition. SEI NO will also providing the judges and awards for the annual New Orleans Regional Science fair planned in February.

In October 2015 the new fiscal year for SEI-NO has begun. In 2014-15 a few SEI-NO Executive Committee members have stepped down. These members are **Leslie E Campbell, PE** (Corps of Engineers, New Orleans District), **Engin Egeselli, PhD, PE** (University of New Orleans) and **Chris Carroll, PhD, PE** (University of Louisiana Lafayette) who have moved on to bigger and better things. SEI-NO would like to thanks these members for providing their valuable time and services to the chapter members. A new addition to SEI-NO Executive Committee is **Mark Castay, PE** (TRC Solutions) who started with a bang by volunteering to be the Secretary of SEI NO Executive Committee. SEI-NO is always looking to add new members its Executive Committee to bring new ideas and resources. Anyone who is interested in joining the group may contact the current Executive Committee members. SEI-NO Executive Committee is also looking for the representatives from University of Louisiana Lafayette and Louisiana Tech.

The new officers for SEI-NO for 2015-16 will be **L.T. Cooper, PE** (*Chairman*) and **Mark Castay, PE** (*Secretary*). **James R. Danner, Jr, PE** and **Om P Dixit, PE** will continue to serve as *Treasurer* and *New Letter Editor*, respectively.

The committee is looking for good topics and speakers for future presentations. Members with expertise in the field of structural engineering would be welcome to join the Executive Committee. For any suggestion and information on joining the Executive Committee, contact Chairman L.T. Cooper, PE, at Ltcooper@edg.net.

All seminars are held at the University of New Orleans. Seminar dates and pertinent information on registration or addition of your name to the emailing list can be requested by e-mailing to Om P. Dixit, PE at omdixit@cox.net.

Student Chapter News

LOUISIANA TECH UNIVERSITY

By Mary Voisin, Student Chapter President

The American Society of Civil Engineers (ASCE) chapter at Louisiana Tech University in Ruston, Louisiana is looking forward to participating in the 2016 Deep South Conference at McNeese State University in Lake Charles, Louisiana. Both the Concrete Canoe and Steel Bridge teams have been working diligently to prepare their projects for the conference. This year, the canoe is themed around movies and Hollywood, while school spirit is being incorporated into the steel bridge design.

Louisiana Tech's ASCE chapter has been involved in many events hosted by the university and its organizations. Recently, it hosted the annual Burger Burn; students from the various disciplines in the College of Engineering and Science (COES) were invited to join ASCE and learn about what the organization has to offer, all while enjoying a juicy burger. ASCE has also participated in the College of Engineering and Science Days in Dallas, Houston, Baton Rouge, and New Orleans in order to help high school students learn more about what Louisiana Tech's COES has to offer. In December, the chapter met with some of its executive members from the ASCE Shreveport branch. Since the beginning of this year, ASCE has been participating in the COES Cup, hosted by the Engineering and Science Association (ESA). The organization placed third in the Quiz Bowl competition, and earned points by participating in some of ESA's meetings.

On December 12, 2015, Concrete Canoe held its annual Pour Day where it invited members from the American Society of Mechanical Engineers (ASME) to help pour the concrete for the canoe. ASME has been invited the past two years because the Louisiana Tech chapter of ASCE has enjoyed working with engineers from other majors, especially since the chapter has members of all disciplines.

In the upcoming months, the chapter hopes to invite a guest speaker to one of its meetings, and to participate in the annual service project known as the Big Event. Also, ASCE will be working with Chi Epsilon and AGC/NAST to host an annual Winter Banquet.

Even when there are numerous competition tasks to be complete before conference, the organization continues to find time to be a powerful presence at the university and the community of Ruston.

ASCE Region 5 Continuing Education Seminars and Workshops

Program	Dates	City/State
Deep Foundations: Design, Construction, and Quality Control	March 14–15, 2016	Orlando, FL
Liability of Engineers: How to Stay out of Trouble	March 14–15, 2016	Orlando, FL
Modern Bridge Construction: A TransDisciplinary Challenge—NEW	March 14–15, 2016	Orlando, FL
Streambank Stabilization for Restoration and Flood Control Projects	March 14–15, 2016	Orlando, FL
Structural-Condition Assessment of Existing Structures	March 14–15, 2016	Orlando, FL
Earth-Retaining Structures: Selection, Design, Construction, and Inspection—Now in an LRFD Design Platform	March 17–18, 2016	Orlando, FL
Fundamentals of Earthquake Engineering	March 17–18, 2016	Orlando, FL
Leadership Development for the Engineer	March 17–18, 2016	Orlando, FL
Structural Engineering of a 4Story, Combined Material Building Using the 2015 International Building Code—NEW	March 17–18, 2016	Orlando, FL
Two-Dimensional Modeling using HECRAS—NEW	March 17–18, 2016	Orlando, FL

— CALENDAR OF EVENTS —

JANUARY 2016	
January 15-17	MRLC Regions 3, 6 & 7 – Chicago, IL
January 22- 24	MRLC Regions 8 & 9 – Anchorage, AK
January 15	Region 3 Board of Governors Meeting – Chicago, IL
January 16	Region 7 Board of Governors Meeting – Chicago, IL
January 20	Region 8 Board of Governors Meeting – Anchorage, AK
January 20	Region 8 Assembly – Anchorage, AK
January 21	Region 9 Board of Governors Meeting – Anchorage, AK
FEBRUARY 2016	
February 13-15	MRLC Regions 1, 2, 4 & 5 – Pittsburgh, PA
February 13	Region 4 Board of Governors Meeting – Pittsburgh, PA
February 13	Region 5 Board of Governors Meeting – Pittsburgh, PA
MARCH 2016	
March 15-17	Legislative Fly-in & SGR Committee In-person Meeting Washington DC
March 17 2016	OPAL Gala Washington DC
TBD	State Advocacy Captain Quarterly Call
APRIL 2016	
April 16-17	Region 1 Board of Governors Meeting – Connecticut
April 22-23	Region 4 Board of Governors Meeting – Nashville, TN
MAY 2016	
TBD	State Advocacy Captains Training
AUGUST 2016	
August 14-15	Region 3 Board of Governors Meeting – Chicago, IL)

For more events visit the ASCE Events Calendar: **http://www.lasce.org/calendar.html**

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