## **Volume II, Issue II—Fall 2008**



# DRIVER

## Message from our President

Summer is here and it is HOT HOT! For those of you working in positions that require outdoor activities, please take proper precautions in the summer heat. With summer also comes family vacations, and I hope you all are enjoying your vacations!

I want to thank everyone for their attendance at our Summer Meeting here in Greenville. We had a great showing with about 30 members and friends



Hesha Gamble, PE, PTOE

in attendance, including Susan's darling son, followed by a delicious lunch at City Range. Our tour conductor, Phil Lindsay, City Engineer, led us through the ICAR campus. He gave us the skinny on the development of the project and showed us several interesting sites along the way as we cruised in an open-air trolley provided by the City of Greenville and the Greenville Drive. CU-ICAR is a model partnership and will provide many more learning opportunities for the engineering community. Special thanks to Wil Ravenhorst and Gaye Sprague, my fellow "Greenvillians" for their parts in putting together the Summer Meeting.

Our section will be doing data collection for our technical project on August 13 and 14 in Greenville. Please contact Gaye Sprague for more information. Also, please join us in Columbia on **September 4**<sup>th</sup> for our **Fall Meeting and Scholarship Golf Tournament**. You will find more information about it in the newsletter.

I challenge you to reach out to other transportation professionals and invite them to become active in our section. Also encourage student involvement wherever possible so that we can continue to reach our younger membership. For those of you going to the Annual Meeting in Anaheim, I wish you safe travels and exciting learning opportunities!

At your service,

Hesha

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2008 Dues are now due. Please pay ASAP.

## **SC Section News**



#### Fall Meeting and Scholarship Golf Tournament

As you know, the fall meeting and scholarship golf tournament is set for September 4 at Northwood's Country Club in Columbia. Our meeting and lunch will begin at 11 and the golf tournament will immediately follow. Jenny Humphries, of Wilbur Smith & Associates will give a presentation on Commuter Rail in the Charleston area.

Please RSVP to Jae Mattox at <a href="mattoxjh@scdot.org">mattoxjh@scdot.org</a> by Wednesday August 27

#### Technical Project Update—Volunteers Needed Gaye Sprague

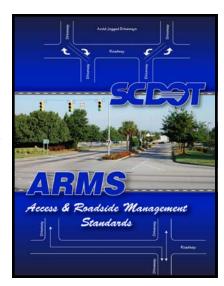
Plans have been finalized for the data collection portion of our section technical project. We will be doing an "after" study regarding shared-use parking for the downtown baseball stadium in Greenville. The dates are Wednesday, August 13 and Thursday, August 14. We want to study both nights and will meet in the County Square parking lot at 5:15. Then we'll each have an area in which we will count parked cars at 5:45 and then again at 7:15. After that, we'll meet at the front gate of the stadium. The City of Greenville is being our host for the game. (If you can't stay, that's OK too.)

Please e-mail Gaye Sprague at gayesprague@cs.com if you can help. Everyone is welcome! We can only supply game tickets to those who help with the counts, but anybody that can join us at the game, you can get your own general admission ticket and join us for the game even if you can't help with the counts. The City of Greenville is also going to take aerial photoghaphs on the 14th to support our efforts, so we should have a great project to turn in to Southern District. Please try to participate.

## SCDOT Releases Erratum to 2008 ARMS Manual Jae Mattox

On July 1, 2008 the SCDOT released it's 2008 Edition of the Access and Roadside Management Manual. Since that time, various errors have been identified which have made it necessary to create an errata sheet for the document. If you printed the document prior to the date of the latest erratum (July 28, 2008), then please go to the SCDOT website and print the errata sheet which contains the corrected sheets for the document.

http://www.scdot.org/doing/trafficengineering.shtml



It's that time again . . .

# 2008 SCSITE Scholarship Golf Tournament Thursday, September 4th

Who: You, regardless of golfing ability

What: The most fun & affordable Captain's Choice

When: 12 noon, following the 11am ITE meeting/cookout

Where: Northwoods Golf Club, Carolina Research Park, Cola

Why: In loving memory of Ben Sprague\*, to raise

funds for SCSITE scholarships

**How:** Sponsorships (\$150)

Individual Golfers (\$50)

- includes cookout and beverages

Ben Sprague was a larger than life, fun loving guy. He was a big guy with a big heart who enjoyed making other people laugh and bring joy to their lives. His senior year he put his 240 pound frame in a cupid costume and went to school handing out candy on Valentines Day. Ben was a standout on the Greenville High football team and played center. He was also a member of the state championship soccer team in 2007. Ben never missed a day of school from kindergarten through 12th grade. In the fall of 2007 Ben fulfilled a dream by joining his brother at Clemson University. Ben was studying Civil Engineering and was interested in following in his mother's footsteps in the field of Traffic Engineering. Ben tragically passed away in December 2007 and is sorely missed by his family and friends. It is fitting that we get together, enjoy each other's company, and raise money for other aspiring Traffic Engineers in memory of Ben.



Ben Sprague 1989-2007

# REGISTRATION FORM 2008 SCSITE Scholarship Golf Tournament Thursday, September 4th

Hole Sponsor	@ \$150 =	
Individual Golfers (cookout included)	@ \$50 =	
Cookout only	@ \$10 =	
	TOTAL Enclosed	
Contact:	Firm:	
Address:	City, State, Zip:	
Phone:	Fax:	
Email:		
Player #1 (handicap):		_ ()
Player #2 (handicap):		_ ()
Player #3 (handicap):		_ ()
Player #4 (handicap):		)

Complete registration and return with payment to:

SCSITE Golf c/o Don Turner, SCDOT PO Box 191 Columbia, SC 29201-0191 803-737-1459 / 803-737-0271 (fax) turnerd@dot.state.sc.us



Please return by Friday, August 29th

www.scs-ite.org



## South Carolina Students Win First and Second Place in National Poster Contest as Part of National Transportation Week

Two South Carolina fifth-grade students won first and second place in a national poster contest as part of National Transportation Week. The national first place winner was Sean Connor (front, center holding plaque) of Whittaker Elementary School in Orangeburg. Mitch Garrett, of Fork Shoals School in Greenville, was the national second place winner.

Across South Carolina, there were more than 1,100 entries from students participating in the poster contest. In a ceremony held in Columbia on May 15, the first prize winner received a \$200 savings bond to the student and \$500 award to the student's school. The second prize winner received a \$100 savings bond to the student and \$200 award to the student's school.

During the ceremony, 86 students were honored as I<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> place winners in their respective counties. In addition, 7 Highway District Winners and the State Winner were announced. Sean Connor also was the State Winner. Held on May 11-17, 2008, National Transportation Week provides an opportunity for the transportation community to join together for greater awareness about the importance of transportation. National Transportation Week also focuses on making youth aware of transportation-related careers.

The award was presented to Sean Connor in Columbia on May 15. Shown from left are: John Connor (his father), Harolyn Conner (his mother), Ashton Conner (his brother), Jae Mattox of the South Carolina section of the Institute of Transportation Engineers, Sean Connor, SCDOT Deputy Secretary of Finance and Administration Debra Rountree, SC Division Administrator of the Federal Highway Administration Bob Lee, SC Alliance to Fix Our Roads Executive Director Debbie Bass, SCDOT Deputy Secretary For Engineering Tony Chapman and FHWA Office of Professional and Corporate Development Associate Administrator Joe Toole.







## **SCDOT Traffic Engineering Golf Tournament**

The 20th annual Captain's Choice Tournament has been scheduled for **Monday** - **September 15, 2008** at **Traces Golf Club in** Florence. For directions see the attached map.

We plan a 11:00 a.m. shotgun start, so please be at the clubhouse no later than 10:30 a.m.

Entry fees will be \$40.00 per person and will include cart, green fee, range balls and a meal at the golf course (Chicken Bog) after the tournament. Beverages this year will be available and you also can bring your own cooler. Prizes will be awarded to the top three teams, Bradley Cup winner, four closest to the pins and one longest drive.

For an additional \$5, a golfer will receive a mulligan and a red tee shot, to be used by that player only, limit I mulligan and red tee per player. Mulligan and red tee shots will not be eligible for closest to the pin or longest drive contests. (This money will be collected at the course prior to play beginning.)

Each team will be assigned a handicap based on the scores that team submits. Please enter each player's average score on your entry form. Maximum allowable score for men is 108 score and 112 score for women.

In order to be eligible for the Grand Prize - (The Bradley Cup) One member of your team must be a current employee of SCDOT Traffic Engineering or District Traffic Engineering Office. All other teams will be eligible for 1st, 2nd, 3rd place as well as (4) closest to the pins and longest drive.

Team entry fees of \$160.00 should be sent for each team to Bryan Berry at Traffic Engineering District 5 Office. Checks should be made out to Bryan Berry, and sent no later than September 10, 2008. We will have a maximum of 32 teams. Teams with a Traffic Engineering employee will have priority, and then we will go by the date the applications were received.

#### **ENTRY FORM**

NAME:	PHONE #(Wk)	AVG SCORE	DEPT
l			
2			
3			
4			

5



## Dennis Corporation Assists Local School District with Growth Management Plan Kelly Tam

As South Carolina's population steadily rises, the ability of schools to accommodate this growth is slowly deteriorating. While School District Five of Lexington and Richland Counties is acutely aware of these growth statistics, they refuse to follow in this downtrend of an over-crowded learning environment for their students. Residents of District Five will vote this fall on a \$256.5 million bond referendum to assist with the costs to build new schools, renovate existing buildings and make improvements around the district.

At the request of the school district, Dennis Corporation, a Columbia based engineering, surveying and construction management firm, has begun preliminary design work to assist the district in their efforts to gain support of the referendum. Over the past several weeks, Dennis Corporation has been coordinating with the school district, Town of Chapin and Lexington County to develop a master plan for the efficiency of roadways surrounding local schools.

The specific areas of interest and focus include student and staff parking, parent drop off areas and bus loading and unloading areas. Dennis Corporation has set a goal to reduce congestion on local roadways during 'busy times' of schools days, while maintaining safety in school zones. Dennis Corporation's site design and traffic divisions will be working closely with county, town and school officials over the next few months to provide School District Five of Lexington and Richland Counties the most efficient, effective and safe solutions to these issues as possible.

Dennis Corporation is a South Carolina licensed civil engineering, surveying and construction management firm. Dennis Corporation employs seventy professionals whose specific fields of expertise include civil infrastructure, construction management, construction services, expert witness, intelligent transportation systems, program management, special projects, surveying, traffic engineering and transportation engineering.





Since the early 1970s, the original plan for the Mark Clark Expressway included a connection between West Ashley, Johns Island and James Island.

In November 2004, the voters of Charleston County approved a half-cent sales tax for transportation, public transportation and greenbelt projects in the county. To complete the plan for the Mark Clark Expressway, Charleston County officials used these sales tax transportation projects as a local match to apply for funding from the South Carolina Transportation Infrastructure Bank (SIB) in 2006. Upon review of the application and the availability of matching funds, the SIB committed to fund the project.

Today, the South Carolina Department of Transportation (SCDOT) will move this important project forward through the planning phase with a new Environmental Impact Statement (EIS), with the eventual goal of acquiring right-of-way and construction.

The proposed completion of I-526 will add approximately seven miles of new roadway between its current endpoint at US 17 (Savannah Highway) and the James Island Expressway Interchange at Folly Road. Charleston County proposes to construct a multi-lane, controlled-access roadway with a grade-separated interchange at Maybank Highway (SC 700) and two bridges over the Stono River.

In association with the Federal Highways Administration (FHWA), Charleston County and the SIB, the SCDOT will develop the EIS, a process that will include looking at alternatives and comparing the impacts on both the natural and human environment. Efforts will be focused on public involvement and communication to ensure the successful development of the environmental process. Due to the major roles state and federal resource and regulatory agencies play, the project team will work closely with them in completing the environmental review process.

Read More at <a href="http://www.scdot.org/l526/default.shtml">http://www.scdot.org/l526/default.shtml</a>

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### WIN-WIN for Mount Pleasant, SCDOT, and the SIB

Brad Morrison and Rick Fauteux, PE

In what is believed to be a first of its kind partnership, the Town of Mount Pleasant (Town), the South Carolina Department of Transportation (SCDOT), and the South Carolina State Infrastructure Bank (SIB) have joined efforts to execute a \$51M intersection improvement project in the Town of Mount Pleasant. This partnership is unique in that it is the first time a major roadway project solely funded by the SIB will be fully managed by a municipality, as opposed to being managed by SCDOT or by a county through a local option sales tax program.







Brad Morrison
Town of Mount Pleasant

The project involves the terminus of the I-526 (Mark Clark Expressway) at US 17 and Hungryneck Boulevard in Mount Pleasant. This existing at-grade intersection plays a key role in local, regional, and statewide mobility given demands placed on it by residents, commuters, neighboring islands, nearby ports, as well as tourists and commerce interests using South Carolina's primary coastal highway. This intersection also functions as a connector for two of the states designated Truck Routes and provides interconnectivity between the area's thriving ports. With an existing population of 65,000 residents, which is expected to grow to over 90,000 by 2030, travel demands increase significantly and the Town's Long Range Transportation Plan identifies this intersection as a critical node for capacity improvements as growth projections are realized. Because the location is the junction of three arterial facilities, planners and engineers agreed that getting the project funded sooner rather than later would be key to ensuring an acceptable mobility and quality of life for the Town's residents. For this reason, Mayor Harry Hallman spearheaded the funding effort and convinced Town Council to submit an application to the SIB in 2004. As a former State Representative that authored much of the legislation establishing the SIB, Mayor Hallman was persistent in meeting with the SIB Board to support the application. This effort was eventually rewarded in 2006 when the SIB approved the application with a total funding commitment of \$51.4M. In the application, the Town emphasized their on-going efforts to improve the state highway network through a Transportation Capital Improvement Plan that has committed over \$30M to that effort. One of the primary facilities being funded through the Capital Improvement Plan is the Hungryneck Boulevard Corridor, which is one leg of the interchange and establishes an alternative north-south route along US 17.

After funding was secured, the Town selected HDR Engineering, Inc. of the Carolinas as its design consultant and laid out an aggressive schedule to complete the project. The Town desired to complete this major project within 4 years from the start of design. To meet that schedule, however, both Town staff and HDR realized that *THE* key element would be a successful partnering effort with SCDOT, who would eventually own the facility, and the affected utility companies, who would have to relocate before construction could begin. This partnering effort was carefully defined in an intergovernmental agreement (IGA) between the Town and SCDOT. The IGA specifies specific commitments by both parties to partnering sessions, a design criteria approval process, and submittal and review timeframes that will ensure a smooth project progression through the design process and into construction. Since Notice to Proceed was issued on June 1, 2007, three formal partnering sessions have been held and significant progress has been made in resolving issues before they could have affected the project schedule.

Continued on next page



Each partnering session is professionally facilitated and mandates attendance by all stakeholders in the design process, including the design team, Town staff, SCDOT staff, SIB staff, and representatives from the utility companies. One of the most effective products of the sessions is identification of any challenges, opportunities, and/or issue resolutions required to advance the project and then assignment of an action item, a responsible party and an expected date of completion. With continual reporting of action item resolutions at each partnering session, this process instills a sense of ownership and commitment to the project's successful completion.

The initial stage of the project consisted of a thorough review of alignment alternatives, interchange geometries and also included several public meetings to gather comments. A single point urban interchange (SPUI) and a tight urban diamond interchange (TUDI) concepts were studied and evaluated for their effectiveness in reducing traffic delays and congestion. For this location, the SPUI concept provided a reduction in delay/vehicle, total delay, and a reduction in the number of stops over the TUDI design concept. Various alignments were investigated and preliminary impacts were quantified. The team's property acquisition sub consultant was brought in to provide preliminary cost estimates for each alternative and preliminary construction cost estimates were prepared. After considering the cumulative impacts for each alternative, the centered alignment was selected by the Town. This alignment option introduced a combination of horizontal reverse curves as well as steep vertical grades which must be accommodated by the overpass, a combination of MSE wall-retained fills and bridge structure.

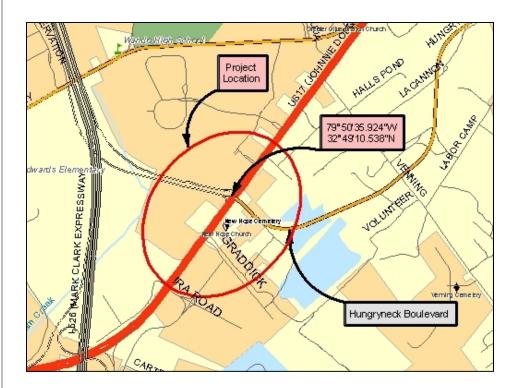
Special emphasis will be placed on the overall site aesthetics to soften the structures appearance in the urban environment. The Town and SCDOT have recently completed widening US 17 north of this project site and scope of work included landscaped medians and decorative street lighting. It was imperative that this project be an extension of this previous work. As such, proposed improvements include aesthetic treatments to the MSE retaining walls and barrier rails, aesthetic considerations for bridge type selection, landscaping, and decorative lighting. With project partnering in mind, the most recent partnering session involved bringing together the Town and the team's landscape architects, as well as SCDOT. Armed with markers and colored pencils, the group marked through the entire set of preliminary roadway plans and identified potential planting locations and made suggestions on additional possible landscaping locations. The team's designers will take this information back and adjust the design where feasible to accommodate as much greenspace into the project as possible.

Partnering has proven to be a key factor in the successful and timely progression of this project as well as ensuring that all parties involved are getting their input into every facet of this project. Partnering sessions have allowed an avenue for the landscape architects to have input on maximize available greenspace during the design process instead of working with just the final design product. This also allows the designers to mesh the landscaping and lighting with locations of islands, sidewalks, pedestrian crossings, as well as traffic signal placements. Representatives from each of the affected utility companies have been attending the partnering sessions from the beginning. By staying involved, they have been kept informed on the potential impacts this project will have on their facilities. This also allows them to begin the planning process for relocations as early as possible and also provides an avenue for them to provide input to the designers on ways to help minimize utility impacts.

Continued on next page



To date, preliminary roadway and drainage plans have been completed and reviewed by the Town and SCDOT. Work is now commencing on preliminary retaining wall and bridge plans, landscaping, and right-of-way plans. The Town anticipates commencing right of way acquisition in late Fall of 2008 and to advertise the project for construction in early Summer 2009.







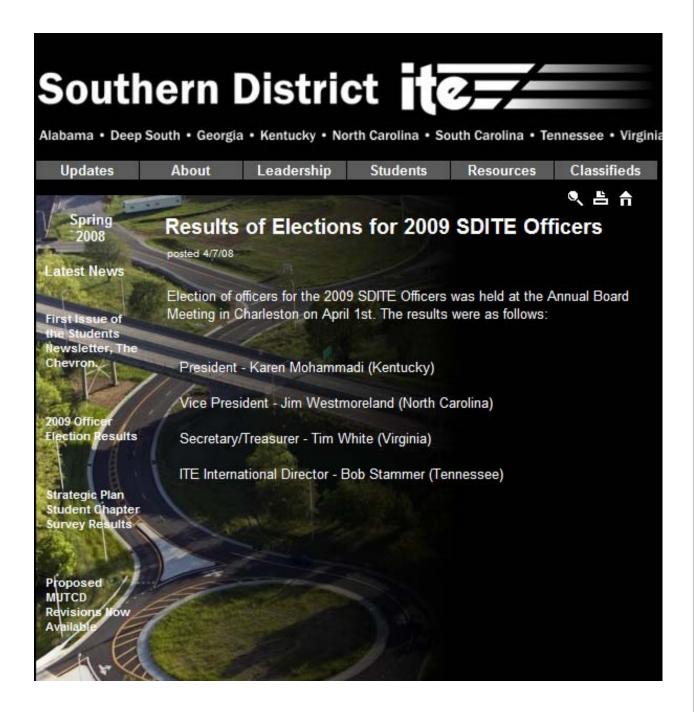






## Southern District News

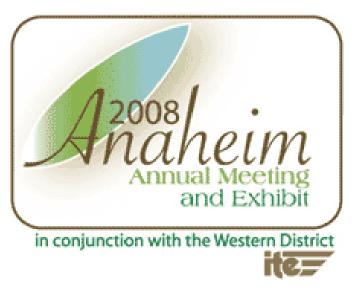
# Check out the Southern District's New Webpage at www.sdite.org



## International ITE News







## **Register Today!**

ITE 2008 Annual Meeting and Exhibit August 17-20, 2008 Hyatt Regency, Miami Florida



ITE 2009 Technical Conference and Exhibit
Transportation Operations in Action
March 22–25, 2009
Phoenix Convention Center
Phoenix, AZ, USA



ITE 2009 Annual Meeting and Exhibit August 9–12, 2009 Henry B. Gonzales Convention Center San Antonio, TX, USA

2009 Call for Abstracts—Deadline August 25, 2008

More information at http://www.ite.org/meetcon/abstract09.pdf



## Members News

#### Adios, My Friends! Debayan Roy



Debayan Roy, El **URS Corp** 

Traffic Engineers – one of the strangest breeds in the entire world. Who else becomes happy when the traffic becomes worse! When most of the roads are operating at "acceptable levels of service" us traffic engineers become very sad. No roadway improvements; no work for us. When congestion increases, high delays are observed at intersections, traffic volumes become significantly high; it seem to us traffic engineers that God finally decided to shine His bright light upon us. We become vigorously active. Nothing would light up our faces more and bring a smile bigger than proposing adding that additional lane to the freeway in each direction, or maybe the highway; heck, maybe even that two-lane road serving those subdivisions!



South Carolina, one of the greener states, has always been of a much gentler nature when dealing with traffic. Traffic has been a little bad lately; the main culprits (or favorites, for us traffic engineers) being US-17, in Mount Pleasant and US-278 in Beaufort. However, when compared to states like California or

Nevada, or maybe even Michigan, traffic in South Carolina ain't that bad! This is probably one of the reasons why, lately I was thinking of moving to one of the worse-traffic states in pursuit of that strangest profession of mine! And lo-behold, I got a job offer in Maryland. This offer made got me thinking; but, finally I decided to accept the offer. I will be working as a traffic engineer with URS Corporation in their Hunt Valley, Maryland office starting the last week of August.

Our South Carolina section of ITE has been a wonderful experience for me; and I would encourage all the young (or old, if anybody accepts they are, that is!) members of our section to actively take part in all of our events. The experience truly has been overwhelmingly pleasing for me; the people in our section are some of the nicest persons I have met, and the unity has just been right for us to carry through major events, like the Annual District meeting in Charleston.

Although my stay with our SC section has been very brief, only about two years; and about six months serving as the Secretary/Treasurer, why am I still feeling this significant pain in my chest? No I am probably not going to have a heart attack. I think it is due to the close bonding of us, you all, my friends; this pain is to leave you all.

#### WEBMASTER NEEDED!!

Many thanks to Debayan for all his hard work for our Section this past year. He has been a valuable asset and will be sorely missed.

With his leaving, we have a huge hole to fill. This past year Debayan took over as Webmaster for our Section's website. If anyone from the section can take over as Webmaster, please contact Jae Mattox at mattoxjh@scdot.org or 803-737-1805 immediately so we can pick Debayan's brain before he leaves for Maryland. If we can't find anyone, we will be forced to hire someone to make our periodic updates.



#### Update from the Mountain State Andrew Nichols, PhD, PE

It has been almost a year since Dr. Andrew Nichols left South Carolina to return to his home state of West Virginia. It has been a busy year getting settled in to his new job. At Marshall University, he has been responsible for teaching engineering economy, introduction to engineering, and transportation engineering courses. He has also been helping the program prepare for their first ABET accreditation visit in 2009. In addition to his teaching and university responsibilities, Andrew is conducting research in conjunction with the Nick J. Rahall Appalachian Transportation Institute, a University Transportation Center. He has been assisting the West Virginia Department of Andrew Nichols, PhD, PE Transportation with their first statewide ITS deployment.



**Marshall University** 

This deployment includes the construction of a new traffic management center at the WVDOT headquarters in Charleston, WV and a backup center in Huntington, WV that will be housed and operated by the Transportation Institute. He is the principal investigator on a 5-year research project to evaluate the statewide deployment. Another research project with the WVDOT is underway to evaluate a new video detection technology that utilizes a single fish-eye camera to detect all four intersection approaches. The technology will be installed at an existing signalized intersection along with traditional loop detection and video detection for comparison purposes.

Andrew continues to perform traffic engineering work for Dennis Corporation, based out of Columbia, SC on projects in South Carolina. He is actively pursuing new projects in West Virginia and serves as the WV division manager. The picture below was taken during the installation of the first changeable message sign on I-64 between Huntington, WV and Charleston, WV.









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## Members News

## Bryan Webb to serve as SCSITE Secretary/ Treasurer for the Remainder of the 2008 Term

The SCSITE Board has chosen Bryan Webb to serve the remainder of Debayan's term as secretary/treasurer for the section. As Senior Highway and Transportation Engineer at Davis & Floyd, Inc., Bryan works with traffic engineering, construction management, and highway design. Prior to joining Davis & Floyd, he was a project manager for a roadway construction company as well as Assistant Resident Construction Engineer and District Traffic Engineer for SCDOT. Bryan is also a graduate of the SCDOT's Strategic Training for Transportation Agency Representatives (STTAR) program. Bryan served on the SDITE Local Arrangements Committee this past spring In addition to SCSITE, Bryan is a member of the Civil Engineers Club of Charleston. He earned his bachelors of science degree in Civil Engineering from Clemson University.



Bryan Webb, PE, PTOE
Davis & Floyd

DAVIS
Architecture
FLOYD Environmental & Laboratory Services

## Joseph Sturm Joins SCDOT Traffic Engineering

Joseph Sturm recently began his career as an associate engineer in the SCDOT traffic safety and systems group. His interests in transportation include traffic safety, ITS, access management, environmental and financial stewardship, and bicycle/ped. friendly facilities. Joseph received his B.S. (2006) and M.S. (2007) degrees in civil engineering at Clemson University and was involved with the ITE student section there. He also received an Eisenhower Fellowship through the US Dept. of Transportation and worked for over a year on a research project for the Federal Highway Administration. This project focused on cost disclosure and cost certainty at early stages of project development, especially the stage of the environmental impact statement. He gained valuable experience and contacts working in the nation's capital, but couldn't stay away for very long because South Carolina is home.



Joe Sturm, EIT SCDOT Traffic



Amanda Hawkins, EIT The LPA Group



#### **Meet Amanda Hawkins**

In October of 2005, University of South Carolina Civil Engineering student Amanda Hawkins joined The LPA Group as an intern. After graduating she was hired as a full time employee. She worked as a Roadway Engineer designing roads, sidewalks and drainage improvements at the LPA corporate office in Columbia. In July of 2007, LPA offered Amanda a position in Charleston, South Carolina.

Currently, Amanda is a Project Manager overseeing several projects including intersection improvements, new pedestrian and bicycle paths, and drainage improvements. These projects are being funded by the Charleston County Transportation Half Cent Sales Tax.

Amanda obtained her Bachelors of Science degree in Civil Engineering from the University of South Carolina in 2006. Currently, she is working on her Masters of Engineering degree in Civil Engineering at North Carolina State University.



# Iteris' Eric Tripi Selected to serve on ITE's Manual of Transportation Studies Manual Committee Eric Tripi, P.E., PTOE

Back in May, ITE sent out an e-mail to all members asking for volunteers to serve on a Technical Advisory Committee (TAC) to develop a second edition of the *Manual of Transportation Engineering Studies*. This manual, many of you may have seen a copy, contains discussions on the different types of traffic and transportation studies and how to collect various kinds of traffic data. Since 1994 when the first edition of the *Manual* was published, technologies and standards of practice have evolved significantly. So, ITE was seeking help in updating this important reference to reflect the current state of the practice.

As a traffic engineer, I've always felt that traffic and transportation engineering studies formed the backbone of our profession and thus should be taken very seriously. Therefore, the opportunity to serve on this committee really intrigued me. I decided to go ahead and send in a letter of interest and resume. Well, to my surprise, I was selected to serve on the TAC along with 10 other professionals from around the world. I was thrilled!



Eric Tripi, PE, PTOE Iteris

The TAC all convened at ITE Headquarters in Washington D.C. on June 24<sup>th</sup> and 25<sup>th</sup> to begin the process of revising the 514-page manual. The first day there, we were shown around ITE Headquarters (which is located just a few blocks from the White House) by ITE's Executive Director and CEO, Tom Brahms. I was amazed at the number of people that they employ and the different types of work they do. All types of professionals work there: engineers, planners, marketing directors, technical writers, graphic artists, and a large support staff. Their publications room alone was huge – they send out hundreds of manuals, books, and other materials each week. A very impressive operation.

ITE has a great brainstorming process that they use to update all of their manuals. Our II-person TAC sat around a huge table along with Tom Brahms, who sat in periodically, and other ITE staff and just threw out ideas. Although we did follow an agenda, the cross-firing of ideas was amazing. Our goal was to shape the content for the new *Manual*. We more than shaped the content. If anyone has seen the manual, as mentioned earlier, it has 514 pages. One of the things that came out of our roundtable discussions was the potential for the manual to be split into two volumes that can be sold together or separately. One volume would have a soft cover, made for field use, and just contain a step-by-step guide on how to do all kinds of different traffic data collection studies, e.g., gap studies, stopped-delay studies, turning movement counts, queue studies, etc. The other volume would be a hardcover manual with more detailed discussions about all of the different types of traffic and transportation studies, e.g., traffic impact studies, crash studies, goods movement studies, etc. It is unknown at this point if this is the direction the manual will go; however, it is the one I endorse!

The RFP should be posted by early August for anyone interested in taking on the work of rewriting the manual per the guidelines developed by our TAC.

Overall, it was a great experience for me and I would recommend to anyone interested to seriously consider trying to get on a future TAC manual update. It is very rewarding!





## College Corner

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**Clemson University ITE Student Chapter Advisor** 

## **News from the Clemson Student Chapter**



The Clemson Chapter has been pretty quiet since returning from the District Meeting in Charleston. The students had only a few weeks to hit the books before final exams. The summer is typically quiet, and this year is no exception. Members are either working on research projects in Clemson, doing internships, or are traveling. Student Chapter President Wayne Sarasua, PhD, PE Priyanka Alluri just completed her Master's and is in India until the end of August. She'll return a married woman pursuing a Ph.D. at Clemson. Chapter Secretary Joann Zhou is also pursuing her Ph.D after just completing a Master's.

The Chapter is looking forward to the new school year and defending their Southern District Best Student Chapter title.



Clemson Student Chapter at the ITE Headquarters in Washington, D.C.



Clemson Student Chapter after winning the 2008 Traffic Bowl



#### **SCSU ITE Student Chapter Research**

In the summer, many students in the transportation graduate program at South Carolina State University are busy with various research projects and internships. Mr. Otukile Lekote, who is the Secretary of SCSUITE Student Chapter, is working on a research project titled "A Real-Time GIS /Hydrology Flood Warning system for First Responders in Rural Areas". This project seeks to integrate readily available hydrology models with accumulated and real time precipitation data to predict the likelihood that transportation infrastructures, e.g. roads, bridges, underpasses, etc in rural areas will be flooded during severe rain events. The integrated system can greatly assist emergency and rescue personnel in identifying potentially flooded transportation infrastructures and finding



Yuanchang Xie, PhD SCSU ITE Student Chapter Advisor

the shortest and most reliable route to send help to the corresponding areas. In this project, the Watershed Modeling System (WMS) developed by the Environmental Modeling Systems, Inc. is being used to model surface water conditions. The output from the WMS will be fed into ArcGIS to overlay with trans-

portation infrastructures, and the result will allow areas that are highly likely to be impassable to be identified. The project is still at its preliminary stages. Several study sites have been visited and their characteristics that will play a role in the model calibration and validation have been documented. More areas will be visited in the rest of the summer. The research team has started to model some of the sites that have been visited, and has also started to create the framework of the final product, an internet server-client mapping system. Once the WMS model is completed, it will be integrated with the ArcGIS system and made available on the internet.

Otukile is playing a key role in this project. He has been working hard with Dr. Stephen Katzberg to collect and process all the data required by the WMS in the summer and has done a great job. He is now assisting Dr. Di-Wen Chen in getting the WMS up and running. Otukile enjoys working on this project very much and has decided to use this topic for his thesis. Otukile also learned a lot from what he has done for this project. He is now very familiar with the latest ArcGIS products such as ArcMap.





From left to right Dr. Tom Whitney, Dr. Stephen Katzberg, and Otukile Lekote





## Job Opportunities

### City of Greenville Traffic Operations Engineer

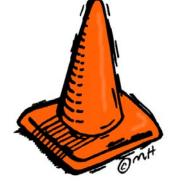
Performs a variety of duties in support of the City Traffic Engineer and Traffic Engineering Division including securing information needed for solving traffic control problems, analyzing accident histories at intersections, developing signal system plans and timings, drafting plans for signs, signals and marking, to facilitate the flow of traffic, ensures the safety of citizens and reviews site permits.

Requires a Bachelor's degree or equivalent in Civil Engineering; over four years of experience; a valid SC driver's license; prefer minimum one year experience with EIT Certification by the SC

Board of Registration for Professional Engineers and Land Surveyors

Salary Range: 47,179 - 68,984 Closing Date: When Filled

Applications can be obtained from: Ruby Moore City of Greenville 206 S Main St., 2nd Floor - City Hall Greenville, SC 29602



## Assistant Beaufort County Traffic and Transportation Engineer

Provides technical traffic and civil engineering skills for planning, design, operation and management of traffic signals, signing, pavement marking and signal system projects for Beaufort County.

#### **MINIMUM REQUIREMENTS:**

- Bachelor of Science degree in Civil Engineering from an accredited college with concentration in traffic and transportation engineering
- Masters of Science degree in Engineering preferred
- Three years experience in traffic engineering or traffic signal systems
- Passing grade from Fundamentals of Engineering (FE) Exam
- Must possess and maintain valid driver's license



Interested applicants should contact Colin Kinton for more information.

ckinton@bcgov.net

Phone: (843) 470-2631



#### **Richland County Engineer**

Richland County Government is seeking a highly qualified and motivated candidate to fill the position of the County Engineer. The County Engineer is responsible for directing, managing, supervising, and coordinating the services and activities of the Richland County Engineering Division including transportation engineering, right-of-way acquisitions, plan review, and construction inspection which includes the preparation of engineering studies, reports, and cost estimates for the Public Works Department and County Council. This position also makes presentations to County Council and the general public.

This position requires a BS degree in civil engineering from an ABET accredited college with a minimum of 5 years related experience or equivalent combination of training and experience. The incumbent is required to use a variety of equipment including computers using Windows operating system and have some relative experience with AutoCAD. This position requires a valid South Carolina driver's license and must be able to obtain a South Carolina Professional Engineer Registration within 6 months of employment.

Applications can be obtained from:

Richland County Human Resources Office 2020 Hampton Street Third floor, Room 3058 Columbia, SC 29204

Phone: (803) 576-2110



Available Positions Booklet from the ITE 2008 Technical Conference and Exhibit can be downloaded at

http://www.ite.org/Conference/ITE\_TC08



Puzzle Mania

## **Letter for Number Substitution**

Solve the letter to number substitution below to determine the II letter key phrase. A different letter has replaced each number I-8 in the standard division problem.

Be the first to solve the puzzle and you will be recognized in the winter newsletter and receive a \$5 discount at the fall meeting. Email your answer to mattoxjh@scdot.org



## Last Issue's Challenge

Congratulations to Susan Ruinen for being the first to solve the cryptograph challenge in the last issue. The answer, as shown below, was level of service.



Imbedded in the matrix of random letters below is a 14-letter statement related to traffic. The letters of this statement form a contiguous chain in which each word can go in any direction, but there are no turns within a word. As an example, "STOP SIGN", which is not part of the puzzle, is highlighted. A clue to get your started - the answer is three words.

F Υ U В V Ε D S Q W S Т 0 0 Ρ K L S D F Ε ٧ S R Т В U C G Т R S Ν Р Α W Ν Ε C Н Α Ν V V Т С Ρ W Υ Т Υ Υ U Ε 0 M R Ν M 0 W R Χ В V E ı Ρ 0 В W F В Τ W O J Χ 0 Α M Т ٧ L K Н Q Ε L Ν P S В S 0 Ρ C Τ R C Y U Н M W Υ Н Q Μ 0 P W Ρ S F Τ P S W D Υ U U Ν G V Q D Y O L W R Η V 0 В G F S G S Ρ D Ρ C Ε K Ν W J K Ν U Y Ε W O G В Ρ Ε C Т В S W Η D Ν U 0 Ν V Υ W Ν U 0 Р W Ν S Т Р Ε Ε Ρ N Н G 0 ı Ν 0 ı X Μ R W M U Η C E S S F Υ Α G В K L W D J U D D V 0 0 W R C W R В Т O E Р Ρ E O В Χ 0 Α M ı V K Η Α E W O 0 Т R F Χ Υ В D Υ W R R В 0 Ε Υ C В Μ U U Υ Е F Ε C C G Р Α W K D G U C Т R S R Т ٧ В Ν Ε U S C 0 F Т Ε S C J V Н M 0 Р X D Μ ı В V J Т Т U Е S S В Υ R W Υ W G В R Ν M 0 W D Н X R Y Ν S Ε В Ν Α Ρ 0 Ρ Η V Ε Χ Χ J U 0 Υ C Α ٧ I W M В F R R C C Α Т Т Α В 0 Н Υ U D Ν U Р Α W D L U D Ρ U J Ε Ζ D E J R Т 0 C S L 0 Ν W В D M 0 0 J Q W C S F Ε G В R Т J Α J 0 O D Ε Α Т Α Υ Ρ В K Q Ε W В Е W Т В E D Υ U U M L W W Н Α Т K S C Α Ρ Α C F F K F S G Q Ν J V Ν 0 S ٧ 0 Ρ W C Y Q Τ 0 Ρ W U Н W J U Η M Н M M Q Ε 0 Р Ν Ε C Ε W 0 J V M 0 Р W X F 0 Т ٧ Н Α F В T ٧ Ε Ε S Ε Ρ G В W X 0 Α M L W K D J Н В В Ε Ε K S Ε D G W X O W W М



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#### **About ITE**

The Institute of Transportation Engineers is an international educational and scientific association of transportation professionals who are responsible for meeting mobility and safety needs. ITE facilitates the application of technology and scientific principles to research, planning, functional design, implementation, operation, policy development and management for any mode of transportation. Through its products and services, ITE promotes professional development of its members, supports and encourages education, stimulates research, develops public awareness programs and serves as a conduit for the exchange of professional information.

## **JOIN SCSITE TODAY!!**

Membership forms are available on our website. Dues are \$20.00 yearly.

## **Update your Information**

on the website. Your username is your last name followed by your first initial and your default password is "traffic". Make sure you capitalize the first letter of your last name and first initial to login.

## We are on the web at www.scs-ite.org

## **WELCOME NEW SCSITE MEMBERS!**

Joseph Sturm, SCDOT Traffic Berry Mattox, Dennis Corporation

### **Newsletter Information**

"DRIVER" is the official publication of the South Carolina Section Institute of Transportation Engineers, the professional society for transportation engineers in South Carolina. It is affiliated with Southern District 5 ITE, as well as the International ITE.

Any suggestions on format or content are welcome. News on members, the section, or the profession should be submitted to Jae Mattox at mattoxjh@scdot.org.