

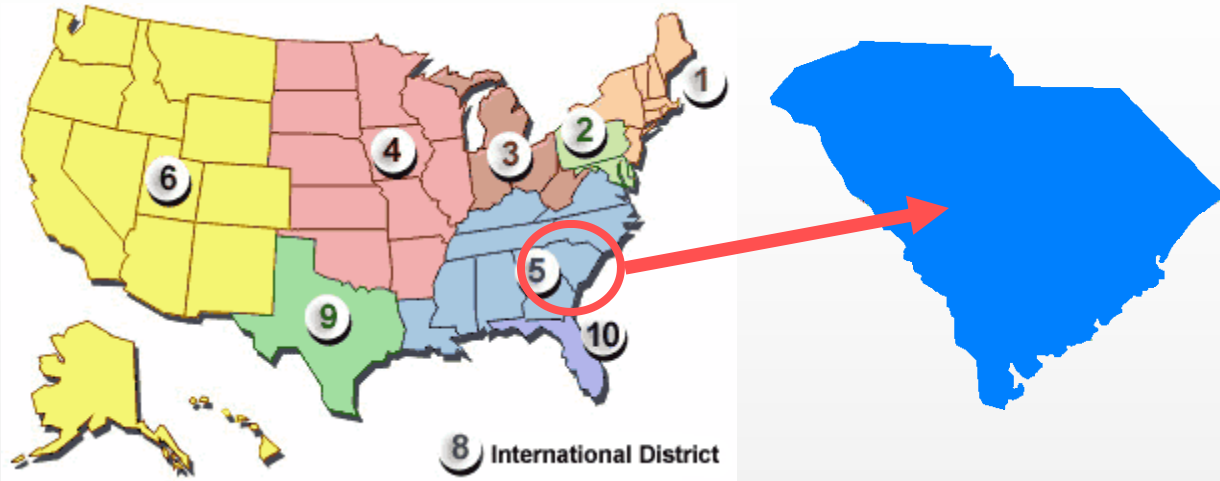


*South Carolina Section
Institute of Transportation Engineers
Section Report*

For the period January 1, 2007– December 31, 2007

South Carolina - A Section on the Move

The South Carolina Section consists of members of the Institute in South Carolina. The section is a part of District 5, commonly referred to as the Southern District.



The South Carolina Section (SCSITE) was granted its charter by the District Board on January 10, 1988. Like its parent organization, SCSITE has its roots in the traffic profession but today represents a much wider range of professionals in the transportation arena.

The purpose of the section is clearly stated in the section's charter as follows:

- 1- advance the objectives of the Institute,
- 2- foster closer association of Institute members,
- 3- encourage members to prepare or discuss papers,
- 4-prepare suggestions on matters of policy to the Board of Direction of the Institute,
- 5-consider local transportation and traffic engineering problems,
- 6-cooperate with other local engineering groups on matters of common interest,
- 7-present the transportation and traffic engineering point of view consistent with established Institute policies, and
- 8-encourage the introduction of transportation and traffic engineering courses in colleges, universities, and technical schools in the Section.

SCSITE is one the smallest in the District; however, we are making strides in the right direction. Over the past few years, the section has added members, made significant contributions to our scholarship funds, and provided many opportunities for professional development of our members. At the 2007 Southern District Annual Meeting, SCSITE was runner-up for the section award. The Clemson University Student Chapter has won the District Best Student Chapter Award six of the last seven years and is supplying our section with young professionals eager to get involved. As we move into the new year, the section is gearing up for its 20 year anniversary by hosting the 2008 Southern District Meeting in Charleston, SC. As we reach this important milestone, we pride ourselves on where we have come since 1988 and where we are going. The future is bright for the South Carolina Section, and we are truly a section on the move.



Officers

Current Officers and Committee Chairs:

President: Eric Tripi, PE, PTOE
Vice President: Hesha Gamble, PE, PTOE
Secretary/Treasurer: Jae H. Mattox, III, EIT
Technical Chair: Dipak Patel, PE
Membership Chair: Carol Jones, PE
Student Chapter Coordinator: Wayne Sarasua, PhD, PE

Others:

Past President: Mike Ridgeway, PE
Section Representative: Dipak Patel, PE
Affiliate Director: Tom Dodds, PE
Nominations/Awards: Wayne Sarasua, PE
Scholarship: Gaye Sprague, PE
Social / Golf: Don Turner, PE & Mike Ridgeway, PE
Newsletter Editor: Jae H. Mattox, III, EIT
Website: Debayan Roy, EIT

Membership

Number	Membership Grade	Section Annual Dues
	Honorary	
17	Fellow	\$20.00
	Fellow Life	
	Fellow Retired	
	Member 10	
45	Member	\$20.00
	Member Life	
	Member Retired	
	Associate 10	
	Associate	
	Associate Life	
	Associate Retired	
	Institute Affiliate	
	Institute Affiliate Retired	
102	Student Member	\$0.00
10	Esteemed Colleague	
36	Section Affiliate	\$20.00



Financial

Does your section have a Federal Employer Identification Number? [] Yes [X] No

If yes, what is the number? _____

Balance of Funds on hand at the Beginning of the Reporting Period: \$12,485.38

Income for the Reporting Period:

Table with 2 columns: Description and Amount. Rows include Membership Dues (\$700.00), Gross Income from Meetings (\$2,125.00), Investment Income (\$0.00), and Advertising Income (\$0.00).

Other Principal Sources of Income (please list below):

Table with 2 columns: Description and Amount. Rows include Golf Tournaments (\$4485.00), Donations/Website Sponsors (\$100.00), and Scholarship Funds Interest (\$492.84).

Total Income: \$ 7,902.84

Expenditures for the Reporting Period:

Table with 2 columns: Description and Amount. Rows include Newsletter Printing/Postage (\$25.00), Travel (\$0.00), Meetings (\$2,400.46), Special Projects (\$600.00), and Awards (\$47.70).

Other Expenditures:

Table with 2 columns: Description and Amount. Rows include Website (\$119.40), Scholarships (\$2,250.00), Bank Charges (\$0.00), and Miscellaneous (\$253.00).

Total Expenditures: \$ 5,695.56

Net Income (Expense) \$ 2,207.28

Balance of Funds on hand at the End of the Reporting Period: \$ 14,692.66

Was there a change in the Section Bylaws during this reporting period? (If yes, please attach a copy of the new bylaws.) [] Yes [x] No



Technical Activities

Projects completed during this report period:

SCDOT Access and Roadside Management Standards

The section had several members assist with the review of the proposed revision to the South Carolina Department of Transportation's Access and Roadside Management Standards. Specifically, section members helped develop the state's traffic impact study guidelines (see Appendix) and provided guidance on driveway spacing and location standards.

Traffic Signal Report Card

Carol Jones, SCDOT Traffic Signal Systems Engineer, provided a report to SCSITE in response to South Carolina's score in ITE's 2007 Traffic Signal Report Card. This report has been provided in the Appendix.

Legislative Activities

In 2006, the South Carolina Board of Professional Engineers and Land Surveyors worked on legislation to address the Category B Engineering Registration. This registration was written into South Carolina Law in the late 80s and provided a designation for engineering technology majors who could not otherwise be registered in South Carolina.; however, the designation had no practical use. The P. E. Board Legislation was introduced in the 2007 legislature and allowed a window during which engineering technology majors can be registered through a rigorous portfolio review process. After that window, engineering technology majors will not be able to be registered in South Carolina. The legislation affects current and former SCDOT employees. Gaye Sprague, an SCSITE member, was one of the authors of the new law. She joined others in calling, writing, emailing, and visiting legislators and attending Labor and Commerce Committee Meetings during the spring of 2007.

The South Carolina Department of Transportation went through a complete reorganization in 2007, and many of our sections members were actively involved with this process, which included various meetings with subcommittees of the South Carolina House of Representatives.

One of our most active members, Howard Chapman, attended the Chamber of Commerce Legislative Reception last January and also attended several meetings of the South Carolina House of Representatives Education and Public Works Committee meetings to discuss SCDOT funding and reorganization. Mr. Chapman spoke out for an increase in funding for mass transit.

The section had several members attend The Citadel Legislative Barbeque in Columbia, SC on April 17, 2007. This event gave the SCSITE members a chance to meet and speak with members of the South Carolina General Assembly and other elected officials.

*Meetings*

MARCH 8, 2007 Northwood's CC, Columbia, SC	Spring Meeting and Scholarship Golf Tournament Attendance: 42	Guest Speaker: Derek Piper, PE "Charleston Port Access Road"
JUNE 21, 2007 Wild Wing's , Columbia, SC	Summer Meeting Attendance: 32	Guest Speaker: Andrew Nichols, PhD, PE "Indiana DOT's Experience with Video Detection"
SEPTEMBER 26, 2007 Caesar's Grill, Greenville, SC	Fall Meeting Attendance: 39	Guest Speaker: Tony Sheppard, PE "SCDOT Restructuring"
OCTOBER 26, 2007 City of Charleston Charleston, SC	LAC Committee Meeting Attendance: 12	2008 Southern District Meeting Planning Session
NOVEMBER 1, 2007 LPA Group Columbia, SC	LAC Committee Meeting Attendance: 9	2008 Southern District Meeting Planning Session
DECEMBER 4, 2007 Sprague and Sprague, Inc Greenville, SC	Technical Committee Meeting Attendance: 8	2008 Southern District Meeting Technical Program Planning Session
DECEMBER 10, 2007 Jake's Bar and Grill Columbia, SC	LAC Committee Meeting Attendance: 12	2008 Southern District Meeting Planning Session
DECEMBER 10, 2007 Jake's Bar and Grill Columbia, SC	Christmas Party Attendance: 40	Presentation of 2007 Student Scholarships and passing of the President's Gavel.

Student Chapter Activities

The Clemson University ITE Student Chapter had another banner academic year. During the last year, the Chapter provided opportunities for members in professional development, technical research, fund-raising, service and social activities. Clemson Student Chapter ITE members had the opportunity to interact with professionals at the Chapter meetings, the South Carolina ITE Section Meetings, the 2007 ITE Annual Southern District Meeting, the Transportation Research Board (TRB) 2007 Annual Meeting, and through a series of Chapter field trips.

In January, eighteen members of the Clemson ITE Student Chapter attended the 86th Annual Meeting of the Transportation Research Board held in Washington, D.C. Clemson Student Chapter Members made a strong showing in presenting fourteen papers at the conference, setting a record for the most presentations in chapter history. On Monday night on the meeting, several chapter members attended the ITE student member orientation held at ITE Headquarters. This meeting allowed students to meet and talk with the leaders of International ITE as well as hear speeches about their career paths and suggestions for the future leaders in transportation. Clemson had the largest student contingent of any University to attend the orientation.

In March, three Chapter members (Candice Hein, Yongchang Ma, and Yan Zhou) participated in a transportation challenge at the ASCE Carolina's Conference held at Georgia Tech. Clemson took first place in this competition. In April, the Clemson Chapter ended a very successful school year with the attendance of ten students and three professors at the Southern District ITE annual meeting in Knoxville, Tennessee. SCSITE contributed \$500 for the third year in a row to help offset the cost of travel. Three chapter members represented the state of South Carolina in the "William H. Temple Challenge"--a.k.a. the "traffic bowl." The students were MS students Stuart Day and Marco Friend and Ph.D. student Yongchang Ma. In the first round qualifiers, South Carolina (Clemson) eliminated Georgia (3 Georgia Tech students) and Virginia (three Virginia Tech students) to advance to the finals. In the two other qualifying matches, Alabama eliminated North Carolina and Tennessee, and Mississippi eliminated Kentucky. Louisiana did not send a team. In the finals, South Carolina, represented entirely by Clemson, defended their 2006 title by beating Alabama and Mississippi. The three Clemson students did excellent. At the awards banquet on Tuesday night, Clemson took home the Southern District Best Student Chapter award for the fourth straight year (and 6th time in the last 7 years). Also, Clemson Ph.D. Candidate Ryan Fries was the runner-up for the Best Student Paper Award.

The student chapter's big service project/professional activity this fall was conducting pedestrian counts for the City of Greenville. Several students participated in this activity counting pedestrians at four downtown Greenville intersections during a number of weekday and weekend periods. Another activity, which was a major fundraiser, was helping out with traffic control at the Clemson home football games.



Members of Clemson's Student Chapter at the ITE Headquarters in Washington, DC

Awards Presented During This Reporting Period

Currently, the South Carolina Section does not present any annual awards other than the student scholarships which is discussed in the next section of this report.

Section Activities

Local Arrangements Committee—District 5 Annual Meeting

All hands have been on deck in 2007 as members of the South Carolina Section have been energetically preparing to host the 56th annual District 5 ITE Meeting in Charleston from March 30 through April 2, 2008. Local Arrangements Committee (LAC) co-chairs, W. Jeff Davis and Colin Kinton formed various sub-committees in order to accomplish the various planning elements of the conference. The LAC began meeting at the Spring 2007 Section Meeting and laid out a plan of attack, which has proved successful, as all the accommodations are taken care of. The response to the “call for presentations” sent out by the technical sub-committee was phenomenal with nearly twice as many submittals as previous years. Based on the overwhelming response to the “call for presentations,” this event may draw crowds in record numbers, indicative of the hard work and dedication of the South Carolina Section.



Technical Committee

The technical committee is charged with planning the technical program for each section meeting. In 2007, the technical committee provided three excellent speakers and have already begun soliciting speakers for our 2008 Spring and Summer section meetings. This technical committee took on additional responsibilities this past year as it served as the backbone of the technical sub-committee for the District 5 Annual Meeting.

On another note, the Technical Committee coordinated with several section members to review the proposed changes to the South Carolina Department of Transportation's Access and Roadside Management Standards. Specifically, section members helped develop the state's traffic impact study guidelines (see Appendix) and provided guidance on driveway spacing and location standards.

Scholarship Committee

The 2007 SCSITE Scholarship Golf Tournament was held March 8th at Northwood's Golf Club in Columbia, SC. As usual, everyone had a great time and raised \$3,100 for the scholarship program. Due to everyone's participation and generosity, we were able to give three \$750 scholarships to deserving students at the year-end Christmas Meeting. This year, we had recipients from Clemson University, University of South Carolina, and The Citadel. The scholarship funds that have been established through assistance from ITE are approaching the point where our scholarship funds will be self sufficient. As of November 2007, the Stafford Clark Scholarship Fund and Gilbert Rowe Scholarship Fund are valued at \$19,886.80 and \$16,701.69, respectively. The scholarship committee plans to deposit \$2,000 into the scholarship funds early in 2008.



Nominations Committee

The nominations committee is charged with making recommendations to the section regarding officers and committee chairs. This year's nominating committee, with the help of the 2007 section officers and immediate past president, recommended the Section Secretary/Treasurer Position and District Representative position be filled by Debayan Roy and W. Jeff Davis. Both of these individuals worked extremely hard in 2007 on the LAC Committee, and the section voted unanimously to have them fill the vacant positions.

Membership Committee

The duty of the Membership Committee is to promote membership in ITE. In 2007, SCSITE added three Members and nine Affiliates to our ranks. We anticipate obtaining new members through improved communication from the section newsletter and as a result of hosting the 2008 Southern District Annual Meeting in Charleston, SC.

Newsletter Committee

This year, the South Carolina Section's board set a goal to improve communications throughout the section through the return of the section's newsletter, which was last published in 2001. For months, the newsletter committee worked extremely hard to obtain articles and develop a newsletter that our section members would be excited to read. In the Fall, the first edition of the new and improved newsletter entitled "Driver" was published and distributed to the section. To say the least, the newsletter was a hit and it became evident that there was going to be strong support to continue this effort. The newsletter contained section events, meeting information, district and international ITE news, news around the state, member news and promotions, student chapter news, job opportunities, and much more. Two editions of the newsletter were published in 2007, and the section plans to publish the newsletter quarterly from this point on. A sample of the Winter 2007 newsletter has been provided in the Appendix. To highlight the newsletter and other correspondence from the section, the newsletter committee acquired the services of a graphic designer to design new logos for our section. These logos are provided in the Appendix.

Website Committee

In the past, the section has had to hire individuals to maintain the section’s website and make routine changes. This year, however, one of our new members indicated that they had some experience in web design and could take over as our webmaster. Because we were no longer paying an hourly rate to have someone maintain the website, the section officers began brainstorming for things that could be added to improve the website. Our new webmaster was able to create a directory on the website to archive our sections newsletters, and work has begun to allow members to pay their section dues online through the website in 2008. The website committee was also charged with creating the website for the 2008 Southern District Meeting to be held in Charleston, SC. Screen shots of both websites have been provided in the Appendix.

International Involvement

The 2007 ITE Annual Meeting and Exhibit was held in Pittsburgh, PA. Nearly 2000 transportation professionals from around the world were in attendance. Of the 2000, the South Carolina section had seven members attend. One of our attendees, Gaye Sprague, served as the co-chair of the Policy and Legislative Committee and moderated a session at the meeting. Jae Mattox, secretary / treasurer of the SC Section, presented a paper he authored, entitled “Development and Evaluation of a Speed-Activated Sign to Reduce Speeds in Work Zones.”



Members and Friends of the South Carolina Section enjoy a night out on the town at the ITE 2007 Annual Meeting and Exhibit in Pittsburgh.

Member Accomplishments

Members of the South Carolina Section have had a remarkable year. Two members of our section, Heshia Gamble and Bryan Webb, received their Professional Traffic Operations Engineer (PTOE) Certification. Mrs. Gamble became the first female in South Carolina to obtain this certification. Also, section member Liz Carpenter received her Professional Engineers license.

Mrs. Gamble was also chosen by the ITE Transportation Consultants Council to receive the Young Professionals scholarship. The award consisted of travel reimbursements up to \$1,000 to attend the ITE Annual Meeting in Pittsburgh, PA.



Appendix

- New SCSITE Logos
- Website Screen Shots
- SCDOT's Proposed Traffic Impact Study Guidelines
- SCDOT Traffic Signal Report—Carol Jones
- Winter Edition of the “Driver” Newsletter

New Section Logos





Section Website

South Carolina's ITE - Windows Internet Explorer

http://www.scs-ite.org/officerlist.html

Google G Go Bookmarks 10 blocked Check AutoLink AutoFill Send to




South Carolina's ITE




Institute of Transportation Engineers
South Carolina Section

Home | Sponsors | Links | Contact Us

Directory (login)
Membership Info
Officers
Documents
Events

2007 Officers

President	Vice President	Secretary/Treasurer
		
Eric Tripi, Wilbur Smith Associates	Heshia Gamble, Greenville County Engineering & Maintenance	Jae Mattox, SCDOT

Immediate Past President	Section Representative	Affiliate Director
		
Mike Ridgeway, SRS Engineering	Dipak Patel, SCDOT	Tom Dodds, SCDOT

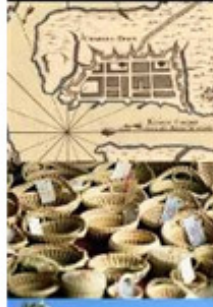
www.scs-ite.org

Southern District 5 Annual Meeting Website



- Home
- Sponsors
- Registration
- Hotel Information
- Technical Program
- Technical Tours
- Golf Outing
- ABD Event
- Traffic Bowl
- Spouse/Guest Activities

Welcome



Dear Dist. 5 ITE Members and Friends;

I am very pleased to extend a warm invitation for you to join the ITE family in Charleston, South Carolina on the occasion of the 56th Annual Southern District (5) ITE Meeting, March 31-April 2, 2008. Spring weather during this normally temperate season is a great time to enjoy the historically charming and beautifully serene SC Lowcountry, and nearby surrounding coastal environs.



A superb technical program is being prepared to inform you of the latest transportation innovations in our profession. New this year, two instructional technical workshops will be offered during Sunday afternoon. The conference program will include sessions on the latest traffic control/operations engineering, innovative intelligent transportation system applications, corridor planning/design, and much, much more.

Our keynote speaker for the opening session will be the Honorable Joseph P. Riley, Mayor of the City of Charleston who is a nationally recognized champion of responsible urban growth and balanced transportation infrastructure. Lieutenant General John W. Rosa, President of The Citadel, will be on hand to provide an official welcome to conference participants.

Greatly enhancing conference interactions, ABD company representatives will be on hand to demonstrate their latest equipment, software and related technologies aimed at helping our profession address traffic and transportation problems we deal with in our communities and states on an ongoing basis.

CHAPTER 6 – TRAFFIC IMPACT STUDIES



6A GENERAL

A traffic impact study (TIS) is a specialized engineering study that evaluates the effects of a proposed development on traffic conditions in an area. These studies help developers and government agencies identify the potential traffic impacts of a development and means to mitigate these impacts both on- and off-site. The District Traffic Engineer (DTE) will evaluate the study, therefore early contact with the Department by the developer is recommended. A TIS will be required for large developments such as major shopping centers, large planned-unit developments, industrial complexes, and other projects that would generate 100 or more trips during the peak hour of the traffic generator or the peak hour of the adjacent street. A change or expansion at an existing site that results in an expected increase of 100 or more trips or if the DTE determines that the proposed development will have a significant impact on the operations at the proposed access points even if the site generates fewer than 100 trips will also require a TIS. The estimate of the number of trips for the sites will be based on the latest edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. In [Table 6-1](#) are examples of land use size thresholds that might be expected to generate 100 peak hour trips that may be used to determine whether a study will be required (*based on 7th Edition of the ITE Trip Generation Manual*). In some instances, thresholds for rural areas and small cities may need to be lower than for urban areas.

Table 6-1: Guidelines for Determining the Need for an Impact Study

Land Use	100 Peak Hour Trips*
Single Family Home	90 units
Apartments	150 units
Condominiums/Townhouses	190 units
Mobile Home Park	170 units
Shopping Center – Gross Leasable Area (GLA)	6,000 sq. ft.
Fast Food Restaurant With drive-in – Gross Floor Area (GFA)	3,000 sq. ft.
Gas Station with Convenience Store	7 fueling pumps
Banks w/drive-in (GFA)	2,000 sq. ft.
General Office	67,000 sq. ft.
Medical/Dental Office	29,000 sq. ft.
Research & Development	71,000 sq. ft.
Light Industrial / Warehousing (GFA)	185,000 sq. ft.
Manufacturing Plant (GFA)	144,000 sq. ft.

*Rates/Equations used to calculate above thresholds are for the P.M. Peak hour of the adjacent street.

A TIS shall be under the direct charge of and sealed by a registered South Carolina Professional Engineer with expertise in traffic engineering. An impact study shall analyze traffic conditions for the existing year conditions, build-out year background “no build” conditions, and build-out year “build” conditions. The study will be used to assess the need for changes in traffic control devices and roadway improvements necessary to accommodate the new development traffic. The study must also justify the proposed access plan and demonstrate the effects of the development on public roadways. The developer of a site will be responsible for making roadway improvements and installing traffic control devices that may be necessary due to the impacts of the new development. These include impacts through the influence area of the development and not limited to those in front of the development. The Department may also require road improvements by the developer without a TIS.

6B STUDY REQUIREMENTS

The DTE should be contacted before a TIS is begun to discuss the requirements and determine the scope of the study. The method used for analysis should be based on the 2006 edition of ITE's "Transportation Impact Analysis for Site Development." In general, the SCDOT requires the following information be contained in a TIS:

1. **Study Area** - Description of the study area including surrounding land uses and expected development in the vicinity that would influence future traffic conditions. The study area shall include the intersections immediately adjacent to the development and those identified by the DTE. These intersections may include those not immediately adjacent to the development if significant site traffic could be expected to impact the intersection. If intersections impacted by the development are within a coordinated traffic signal system, then the entire system shall be analyzed. If the signal system is very large, a portion of the system may be analyzed if approved by the DTE. A study area site map showing the site location is required.
2. **Proposed Land Use** - Description of the current and proposed land use including characteristics such as the number and type of dwelling units, gross and leasable floor area, number of employees, accompanied with a complete project site plan (with buildings identified as to proposed use). A schedule for construction of the development and proposed development stages should also be included.
3. **Existing Conditions** - Description of existing traffic conditions including existing peak-hour traffic volumes adjacent to the site and levels of service for intersections in the vicinity, which are expected to be impacted. Existing traffic signal timings should be used. In general, AM and PM peak hour counts should be used, but on occasion other peak periods may need to be counted to determine the effects of school or special event traffic. In some cases, pedestrian counts will be required. Data should be adjusted for daily and seasonal variations. Existing counts may be used if taken within 12 months of the submittal of the TIS. In most cases, counts should be taken when school is in session unless otherwise determined by the DTE. Other information that may be required as determined by the DTE may include, but not limited to, crash data, stopping sight distances, and 50th and 85th percentile speeds.
4. **Future Background Growth** - Estimate of future background traffic growth. If the planned completion date for the project or the last phase of the project is beyond 1 year of the study an estimate of background traffic growth for the adjacent street network shall be made and included in the analysis. In general, the growth factor will be determined from local or statewide data. Also included, is the state, local, or private transportation improvement projects in the project study area that will be underway in the build-out year and traffic that is generated by other proposed developments in the study area.
5. **Estimate of trip generation** - The site forecasted trips should be based on the most recent edition of the *ITE Trip Generation Manual*. A table should be provided in the report outlining the categories and quantities of land uses, with the corresponding trip generation rates or equations, and the resulting number of trips. The reason for using the rate or equation should be documented. For large developments that will have multiple phases, the table should be divided based on the trip generation for each phase. Any reductions due to internal trip

- capture and pass-by trips, transit use, and transportation demand management should be justified and documented. All trip generation and trip reduction calculations and supporting documentation shall be included in the report appendix.
6. **Trip Distribution and Traffic Assignment** - The distribution (inbound versus outbound, left turn versus right turn) of the estimated trip generation to the adjacent street network and nearby intersections shall be included in the report and the basis should be explained. The distribution percentages with the corresponding volumes should be provided in a graphical format.
 7. **Analysis and Estimate of Impact** - A capacity analysis should be performed at each of the study intersections and access intersection locations (signalized and unsignalized) in the vicinity of the development. Intersection analysis shall include LOS determination for all approaches and movements. The levels of service will be based on the procedures in the latest edition of Transportation Research Board's *Highway Capacity Manual*. Coordination analysis will be required for the signal systems or portion of the signal systems analyzed.
 8. **Access Management Standards** - The report shall include a map and description of the proposed access including any sight distance limitations, adjacent driveways and intersections, and a demonstration that the number of driveways proposed is the fewest necessary and that they provide safe and efficient traffic operations.
 9. **Traffic signalization:** If a traffic signal is being proposed, a signal warrant analysis shall be included in the study. The approval of a traffic signal on projected volumes may be deferred until volumes meet warrants given in the MUTCD. The developer should make any laneage improvements during construction so that if in the horizon year a signal is warranted, one may be installed with little impact to the intersection.
 10. **Mitigation and alternatives** - The traffic impact study should include proposed improvements or access management techniques that will mitigate any changes in the levels of service. The DTE will be responsible for final determination of mitigation improvements required to be constructed by the applicant.

The applicant shall provide all supporting information to the department. Electronic copies of supporting data may be submitted along with printed documents and could expedite the review process. This information may include traffic volumes, capacity analysis, and signal warrant analysis files from software packages. The electronic files that are submitted should be named to identify the contents.

When conditions indicate that there is no need to prepare a TIS, the developer may submit a waiver request to the DTE explaining the purpose of the waiver and providing the necessary supporting information.

The following checklist is used by the SCDOT in the review process and can aid in the preparation of a traffic impact study. This checklist shows the minimum requirements for a traffic impact study to be complete and does not certify or guarantee adequacy or approval. The DTE may require additional requirements during the review process, or during the initial meeting with the developer. Incomplete traffic studies will not be reviewed and will be immediately returned to the permittee.

Traffic Impact Study Technical Completeness Checklist**Analyst Requirements**

Yes No South Carolina PE Stamp and Signature

Yes No **Introduction and Executive Summary**

Existing Conditions

Yes No Study Area Descriptions and Roadway Classifications
 Yes No Analysis Period Correct (AM, Mid-day, PM and/or Saturday)
 Yes No Existing Traffic Operations (LOS, Volumes, Speed Limits, Crash Data, Etc.)
 Yes No Other projected transportation improvements in the study area

Impacts

Yes No Trip Generation Summary (ITE Trip Generation Manual, latest edition)
 Yes No Trip Distribution and traffic assignment (assumptions justified)
 Yes No LOS Analysis: Background traffic growth and site build out
 (Identify existing and background LOS deficiencies)
 Yes No Analysis of Sight Distance at Access Points

Mitigation

Yes No Identify need for Turn Lanes, Capacity and Storage Length
 Yes No Identify need for Signalization
 Yes No Identify Measures to Mitigate LOS deficiencies

Figures

Yes No Vicinity Map
 Yes No Site Plan and Proposed Land Use
 Yes No Existing Peak hour volumes (counts conducted within the last 12 months)
 Yes No Projected Background Peak Hour Volumes
 Yes No Trip Distribution % Including Added Project Peak Hour Volumes
 Yes No Project Build-Out Volumes
 Yes No Existing and Recommended Lane Configurations
 Yes No Intersection LOS (existing, background, build, mitigated) (Figure or Table or both)

Tables

Yes No Trip Generation
 Yes No Intersection LOS (existing, background, build, mitigated) (Figure or Table or both)

Other

Yes No Technical Appendix (e.g. HCM and Synchro Analysis Reports, Trip Generation and Trip
 Reduction Calculations, Signal Warrant Analysis, and etc.)
 Yes No Copies of any Reference Material

2007 National Traffic Signal Report Card – The South Carolina Perspective

By: V. Carol Jones, PE – Traffic Signal & Systems Engineer, SCDOT

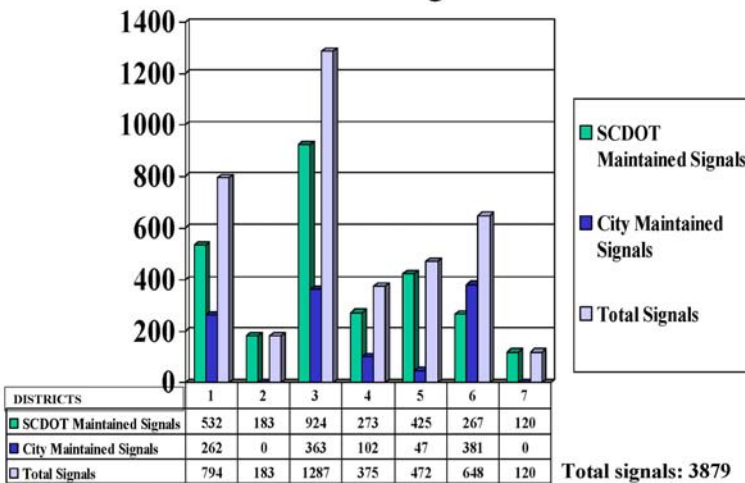
In 2007, the National Transportation Operations (NTOC) performed a comprehensive survey of the state of the nation concerning traffic signal issues this past year. *NTOC is comprised of transportation experts including the Institute of Transportation Engineers (ITE), the American Association of State Highway and Transportation Officials (AASHTO), the American Public Works Association (APWA), the International Municipal Signal Association (IMSA), ITS America, U.S. DOT–Federal Highway Administration (FHWA) and many other organizations.* (from executive report) This was a follow up study to one performed in 2005, and the national grade improved slightly from a ‘D minus’ to a ‘D’. This small improvement is not a big surprise considering only two years between surveys and the lack of dedicated funding and focus on traffic signal management. For those of us involved with traffic signals, we know there are too few people, too few tools, and very little funding. The national report clearly describes the issues and is a document that I would recommend all local and state traffic engineers to read. Both the technical report and the executive summary are available on line at <http://ite.org/reportcard/NTSRC%20Exec%20Summary%20final.pdf>.

Individual agencies were ranked as well and SCDOT’s ranking has been a ‘D’ for both the 2005 and the 2007 Traffic Signal Report Card. We do anticipate a better grade in future surveys as we are making strides in the area of signal management and retiming. Our current grade is not indicative of the capability of the signal staff at SCDOT, but rather indicative of the lack of funding and resources to make needed improvements. The report card covered six main areas, management, signal operation at individual intersections, signal operation in coordinated systems, signal timing practices, traffic monitoring and data collection, and maintenance. Following is a brief overview of SCDOT’s goals for improving in the area of traffic signals in SC.

Signal Management –Although SCDOT has always had expertise available to manage traffic signals and signal systems, including District Traffic Engineers, District Signal System Engineers, District Signal Superintendents, Headquarters staff (Operations, ITS, e Signal Standards committee) Traffic Engineering Management decided to restructure headquarters Traffic Engineering to have one team dedicated to traffic signals and traffic signal systems in 2006. This group was named Traffic Signal & Systems and consists of 6 engineers, 1 communications manager and 1 technician. Carol Jones heads up this group at SCDOT. This focused approach to signals in SC is intended to improve our signal management efforts. The main goal of this group is to establish and maintain signal timing coordination for all SCDOT signal systems statewide on a continued basis.

The following graphs show a bit of information gathered in accomplishing the inventory of signals and systems in SC.

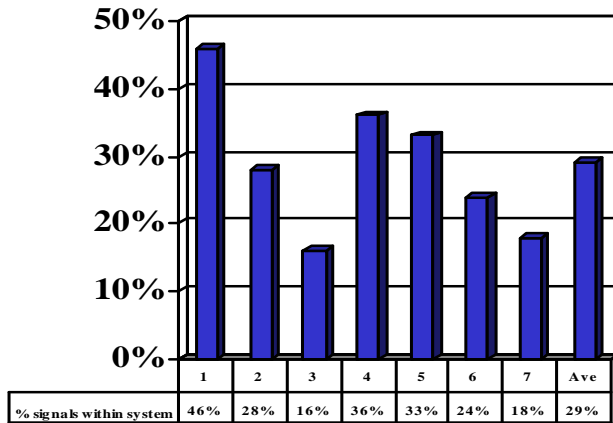
2006 Number of Signals in SC



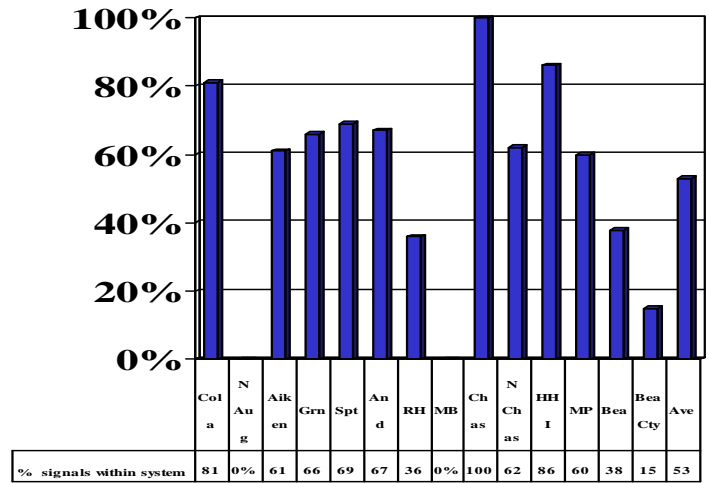
Signal Operation at Individual (Isolated) Intersections

–HQ Traffic Engineering at SCDOT has had a Traffic Signal Optimization Program (TSOP) for many years whereby signals were evaluated for safety and operational concerns and optimized. The annual goal was 40 signals per year and District Traffic Engineers determined which signals would be part of this program. These signals were typically isolated signals however some systems were optimized under this program as well. With approximately 2300 isolated traffic signals in SC, including those maintained by local governments, over 450 signals would have to be retimed each year to meet the goal of retiming on a 5 year cycle. A method of dividing up this work between HQ, the Districts, the capable local governments and consultants will be developed to meet this goal.

% of SCDOT Maintained Signals w/in a Signal System



% of Locally Maintained Signals w/in a Signal System



Signal operation in coordinated systems - There are just over 200 signal systems in SC, with approximately 175 maintained by SCDOT. The average SCDOT system size is 5 signals, while the average system size for locally maintained systems is typically larger.

Many of the systems in SC ideally should be timed more frequently than the 3-5 year recommendation, and TS&S is in the process of obtaining the District’s recommended retiming frequency for each individual system. Then a plan will be developed to divide up this work, again using available resources at HQ, Districts, local governments and if funding is available, consultants.

Funding is actively being pursued to promote signal retiming, as the benefit to cost ratio can be as high as 40:1. Three of the 10 Metropolitan Planning Organizations (MPO) in SC have identified signal system projects with one of the MPO’s allocating a set percent of the guideshare to Signal System projects. The SCDOT Commission recently approved a \$2M program for Statewide Signal Systems including funding for retiming and equipment upgrades. Expected benefits are reduced congestion, improved progression, improved safety and reduced energy consumption due to new LED signal heads, improved pedestrian guidance, updated technology, and improved signal management through the use of cameras and communications.

Signal timing practices - TS&S is in the process of developing standard practice for performing signal optimization. Many systems that are on a frequent retiming cycle simply need field adjustments and minor split and offset changes. Field observations during peak hours indicate the need for minor adjustments or for a full retiming study, known as a TSOP (TSSOP for systems) study. A TSOP study would involve obtaining traffic counts, reviewing signal and timing plans, before and after field studies, developing Synchro models for various timing plans and field implementation/fine tuning with District Signal personnel. A standard report is developed for each study for District review and concurrence prior to implementation.

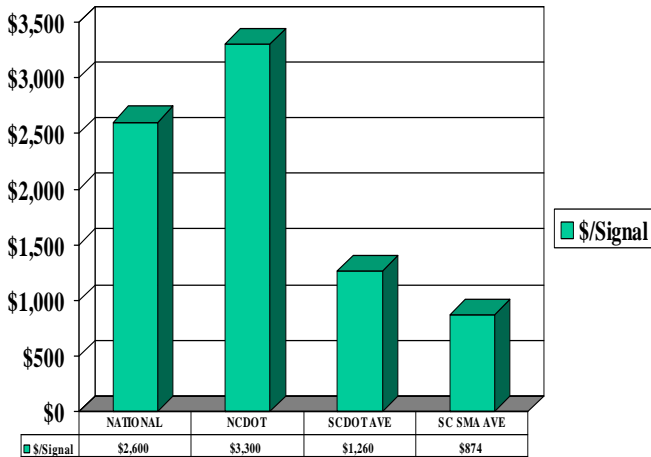
Traffic monitoring and data collection

Although SCDOT has a wonderful network of traffic monitoring cameras along interstate routes, we have a real need for placing more cameras along our signal system corridors. TS&S is in the process of developing a priority list for systems in need of cameras. With cameras, a strong fiber network and communications system is needed to transfer video back to the Signal System operators desktop.

Maintenance

Maintenance is one of the areas that need the greatest attention, due to the lack of resources currently available. SCDOT ranks well below the National and neighboring state's averages in maintenance budget allocations. Currently, less than 1% of the total maintenance funds are allocated for signal maintenance. At SCDOT there is not a separate budget for maintenance, new installations and rebuilds, so in addition to SCDOT ranking low in maintenance dollars available, new signals and rebuilds also come out of the already low budget. TS&S recommends separate budgets for new installations and rebuilds from the signal maintenance budgets. Additional funding is needed in the area of signals.

Comparison of \$/Signal



SCDOT also ranks well below the number of signal maintenance employees needed per signal. ITE recommends a ratio no greater than 31 signals per technician, and the SC average is 46 signals per technician. Two of our Districts have over 60 signals per technician, double the recommended rates. Our District signal maintainers also must cover several counties which indicate a need for spacing out our resources more effectively.

Another challenge is work force development and retention. The job of the signal technician has evolved from mechanical and electrical skills, to include computer/software/communication type skills. The salary available for signal maintainers in SC has not kept pace with the demands of the job. A signal technician is required to work in all types of weather, during all different times of the day and night, and in the roadway.

The benefit to the motoring public for a great signal maintenance program is well worth the cost. Well maintained signals will enable engineers to optimize capacity to the maximum limit. Poor maintenance of detection devices (loops, pedestrian buttons, and video detection cameras) can result in unacceptable queuing during peak hours in a normally well operated signal system. The technology available to engineers can not be fully utilized if our signal maintenance staff is not given the appropriate manpower, proper tools and funding needed to maintain signals and systems effectively.

In summary, SCDOT is writing a vision for the future of signal operations in South Carolina and is hopeful that the necessary resources will become available to make the vision a reality.



DRIVER

Message from our President

Merry Christmas and Happy Holidays to everyone! It is definitely hard to believe that another year has gone by. It seems like just yesterday that Mike Ridgeway passed the SCSITE gavel to me at Jake's.

I have really enjoyed serving as your President in 2007. I think that the SCSITE section, despite our relatively small size compared to other sections in our District (e.g., Georgia and North

Carolina) truly has the potential to be one of the premier sections in the District. We have a solid base of professionals that care about the future success of our section.

I do feel that we already compete on a University level. The fine institutions of Clemson, The Citadel, South Carolina and South Carolina State have proven that. With Clemson being named the District "Student Chapter of the Year" for the last umpteen years and our section's dominance in the Traffic Bowl, it's hard to debate.

I feel one of the best things to happen this year is the reinstatement of the SCSITE Newsletter. The Fall 2007 version was a work of art. Jae Mattox, your soon-to-be section Vice President, should be commended for spearheading the effort. I know it will continue to be a fine document for years to come.

As you know, the SCSITE won the Group 2 "2006 Outstanding Section Runner-up" award this past year at the annual District meeting in Knoxville. I believe that we can win the 2007 Outstanding Section award! Given the strength of our membership, the fine Universities, the scholarships we give out, the meetings we hold and now a newsletter that keeps us all up-to-date – our future is looking bright! How nice would it be to win the award at the 2008 Annual District meeting to be held in Charleston?!!

As I sign-off, I'd like to thank you for making this Yankee feel right at home here in South Carolina. I could not ask for a better group of people to be associated with and I am proud to have been able to serve as your 2007 President.

Best of luck to all of you and here's to a prosperous New Year!



Eric Tripi, PE, PTOE

Eric

Inside this issue:

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2007 dues are now overdue and we are collecting dues for 2008. Please pay your dues ASAP.



Jae Mattox, EIT
SCDOT Traffic



DECEMBER 10
6:00 PM
Jake's Bar and Grill

From the Editors Desk *Jae Mattox*

Hey Everyone! I hope you enjoy reading the Winter Edition of the *Driver*. I had almost decided to wait until the Spring to put together the second issue due to a lack of information, but once I sat down and did some brainstorming and sent a few emails I began to realize how active our section really is.

I want to thank everyone who contributed articles and ideas for both the Fall and Winter newsletters. Putting together the newsletter takes some time, but the hardest part is finding content. If you have something that you think other ITE members may be interested in, please send it to me. The next newsletter will be published in the Spring so please begin thinking about how you can contribute. Also, if anyone is interested in helping out, please let me know.

I look forward to seeing everyone at the Annual Christmas Party!

Date Set for Annual Christmas Party *Jae Mattox*

The SCSITE Annual Christmas Party will be held on Monday December 10th at Jake's Bar and Grill in Five Points (2112 Devine Street, Columbia, SC) from 6:00pm to 9:00pm

Food will be much more plentiful this year consisting of pizza, wings, crawfish tails, chips and salsa, and etc. We will have a short program which will be followed by the presentation of the student scholarships. The cost of the party will be \$15 which includes food and drinks.

Preceding the party at 4:00 pm will be a Southern District Meeting Local Arrangements Committee Meeting.

Please RSVP for the party by December 5 by emailing Jae Mattox at mattoxjh@scdot.org. If you are are interested in playing golf the morning before the party, please contact Mike Ridgeway at mridgeway@srsengr.com.

This event is always a lot of fun so don't miss out.!

WELCOME NEW SCSITE MEMBERS!

Kurt Walters, Greenville County
Charles Dwyer, Earth Tech
Tucker Creed, SCDOT Traffic

2008 Southern District Meeting *Jeff Davis*

I am very pleased to extend a warm invitation for you to join the ITE family in Charleston, South Carolina on the occasion of the 56th Annual Southern District (5) ITE Meeting, March 31-April 2, 2008. Spring weather during this normally temperate season is a great time to enjoy the historically charming and beautifully serene SC Lowcountry, and nearby surrounding coastal environs.

A superb technical program is being prepared to inform you of the latest transportation innovations in our profession. New this year, two instructional technical workshops will be offered during Sunday afternoon. The conference program will include sessions on the latest traffic control/operations engineering, innovative intelligent transportation system applications, corridor planning/design, and much, much more.

Our keynote speaker for the opening session will be the Honorable Joseph P. Riley, Mayor of the City of Charleston who is a nationally recognized champion of responsible urban growth and balanced transportation infrastructure. Lieutenant General John W. Rosa, President of The Citadel, will be on hand to provide an official welcome to conference participants.

Greatly enhancing conference interactions, ABD company representatives will be on hand to demonstrate their latest equipment, software and related technologies aimed at helping our profession address traffic and transportation problems we deal with in our communities and states on an ongoing basis. Technical field trips are being planned to the new Cooper River Bridge and SC State Port Authority. Finally, you will have an opportunity to test your knowledge, to be inspired by our talented student members, and to enthusiastically support your favorite universities through the always fan-favorite William H. Temple Scholarship Challenge.

This year's meeting will be held at the Francis Marion Hotel in downtown Charleston. I believe you will be delighted with the accommodations and amenities the Francis Marion has to offer, not to mention the hotel's extraordinary location in the heart of Charleston's walkable downtown peninsula. The Lowcountry should be in (near) full bloom during this time of year and I think you will take great pleasure in exploring the city's charming streets, meandering along a vibrant waterfront, seeing unique architecture, strolling through lovely neighborhoods, and visiting local attractions.

Of significant note is this year's exciting spouses program that will include a Festival of Houses & Gardens tour, a visit to Middleton Plantation, a carriage ride through the historic district, shopping, (lots of shopping) and much, much more. The perennial conference favorite, Monday evening ABD event will be a "Carolina Beach Party" at The Citadel's Beach House located on the front beach at Isle of Palms. With fantastic views of the Atlantic Ocean, tasty cuisine, great live music, sand between your toes, and entertaining evening of dancing, I believe will combine to make a great event for us all to remember.

So with all of this to look forward to, I hope you will make plans to join us in the Palmetto State for what I know will be a memorable 56th Annual Southern District ITE Meeting in Charleston. You'll have loads of fun, see some interesting sites, leave with some new information, learn what others are doing in the field, renew old friendships, and make new friends amidst comfortable historic surroundings and unique scenic environs of coastal South Carolina.



Jeff Davis, PhD, PE
The Citadel

Response To Call For Abstracts—Overwhelming!

Sunny Nandagiri

Abstracts for consideration in the conference program were accepted between September 14 and November 15 and the response was tremendous with a total of 68 abstracts received from 12 states. For comparison, for the 2007 meeting in Knoxville, only 35 abstracts were received. Members of the technical committee, under direction of Wayne Sarasua and Sunny Nandagiri are beginning to review the abstracts. Members include Gaye Sprague, Dipak Patel, Jae Mattox, Hesha Gamble, and Jennifer Ogle. Potential speakers will be notified by December 15 if their abstract has been accepted for presentation. Also, two workshops have also been proposed on HCS Updates on Roundabouts and Updates to the MUTCD.

The technical program is shaping up to be a real success which could trigger a record attendance to the meeting. Members of the SC Section are encouraged to take advantage of this opportunity.

The next Local Arrangement Committee Meeting will be held on December 10 at 4:00 pm at Jake's Bar and Grill.



Sunny Nandagiri, PE, PMP
Earth Tech



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Charleston, SC

Trekking through the SOUTH  *District 5 Annual Meeting*

March 30 - April 2, 2008

*S*afety and security
*O*utreach and leadership
*U*nique and innovative design
*T*ransportation workforce development
*H*ighway capacity and operation

On the web at www.sdite2008.org

2007 National Traffic Signal Report Card *V. Carol Jones*

In 2007, the National Transportation Operations (NTOC) performed a comprehensive survey of the state of the nation concerning traffic signal issues this past year. *NTOC is comprised of transportation experts including the Institute of Transportation Engineers (ITE), the American Association of State Highway and Transportation Officials (AASHTO), the American Public Works Association (APWA), the International Municipal Signal Association (IMSA), ITS America, U.S. DOT–Federal Highway Administration (FHWA) and many other organizations.* (from executive report) This was a follow up study to one performed in 2005, and the national grade improved slightly from a 'D minus' to a 'D'. This small improvement is not a big surprise considering only two years between surveys and the lack of dedicated funding and focus on traffic signal management. For those of us involved with traffic signals, we know there are too few people, too few tools, and very little funding. The national report clearly describes the issues and is a document that I would recommend all local and state traffic engineers to read. Both the technical report and the executive summary are available on line at <http://ite.org/reportcard/NTSRC%20Exec%20Summary%20final.pdf> .



V. Carol Jones, PE
SCDOT Traffic

Individual agencies were ranked as well and SCDOT's ranking has been a 'D' for both the 2005 and the 2007 Traffic Signal Report Card. We do anticipate a better grade in future surveys as we are making strides in the area of signal management and retiming. Our current grade is not indicative of the capability of the signal staff at SCDOT, but rather indicative of the lack of funding and resources to make needed improvements. The report card covered six main areas, management, signal operation at individual intersections, signal operation in coordinated systems, signal timing practices, traffic monitoring and data collection, and maintenance. A full report outlining SCDOT's goals for improving in the area of traffic signals in SC is available on the SCSITE website at <http://www.scs-ite.org/Files/SCDOT%20Traffic%20Signal%20Report.pdf>





**ITE 2008 Technical
Conference and Exhibit**
March 30– April 2, 2008

Register Today!



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

ITE Recruitment Toolbox

As a respected transportation professional, you have no doubt been asked at some point to participate in recruitment events and activities hosted by primary or secondary schools, colleges or universities, community groups, or other. In response to this request, you have likely either (1) spent significant time and energy outside of your workday researching available recruitment resources and independently developing transportation-related presentation materials and hands-on activities or exercises or (2) politely declined due to time and energy constraints. If your response was the latter, you are not alone.

To make it easier for transportation professionals to participate in local recruitment events and activities, the ITE Transportation Education Council, in cooperation with the Southwest Region University Transportation Center (SWUTC), has developed a “Recruitment Toolbox” that assimilates the best ideas from around the country into an easily accessible, electronic database of proven transportation-related activities and exercises intended to expose and recruit a variety of age groups to the transportation profession.

The Recruitment Toolbox contains a total of 92 activities that cover a range of age levels and topic areas. Check out the toolbox online at the following address:

www.ite.org/councils/Education/Recruitment/default.asp

ITE Web seminars—Your Gateway to Knowledge and Advancement



Date and Time	2008 Web Offerings
Thursday, January 31 2:00 p.m.-3:30 p.m	Intersection Safety and Geometric Design: Sight Distance
Tuesday, February 26 2:00 p.m.-3:30 p.m	Road Diet Handbook: Setting Trends for Livable Streets
Thursday, February 28 2:00 p.m.-3:30 p.m	Signal Timing Fundamentals
Thursday, March 6 2:00 p.m.-3:30 p.m	Signal Timing for Congested Conditions
Thursday, March 13 2:00 p.m.-3:30 p.m	Signal Timing for the Development of Traffic Signal Timing Plans
Thursday, March 20 2:00 p.m.-3:30 p.m.	Advanced Signal Timing
Wednesday, March 26 2:00 p.m.-3:30 p.m.	Characteristics of Bus Rapid Transit (BRT) Web Briefing

More information on the web at www.ite.org/education/webinars.asp

South Carolina's First Strategic Highway Safety Plan Released at SC Highway Safety Conference in Charleston

Terecia Wilson

Law enforcement, traffic engineers and other highway safety advocates met in Charleston in September to explore solutions to reduce deaths on South Carolina roadways.

SCDOT and the SC Department of Public Safety (SCDPS) sponsored the 2007 SC Highway Safety Conference at the Marriott Charleston from September 11-13.

The conference brought together over 230 people representing all the "E's" of safety – engineering, EMS, education, enforcement, and economic incentives.

Secretary of Transportation H.B. "Buck" Limehouse Jr. gave opening remarks. Commission Chairman Bobby T. Jones attended the conference, as well as Vice Chairman Joe Young, Commissioner Marvin Stevenson and Commissioner F. Hugh Atkins. Representatives of Metropolitan Planning Organizations and Councils of Government were in attendance.

The conference was held at a time as highway traffic deaths in South Carolina were increasing. As of Sept. 7, SCDPS reported that 746 people died in traffic collisions compared to 685 at the same time last year. SCDPS officials fear the state could see another record high of traffic deaths.

During the conference, the first ever South Carolina Strategic Highway Safety Plan was released. Entitled, "The Road Map to Safety," the plan is a comprehensive set of transportation safety strategies to increase highway safety and reduce crashes, injuries and fatalities.

"This plan represents the very first time in our state's history that the safety partners came together and jointly agreed upon goals to improve safety," Limehouse said. "It is a living Road Map to guide our state to safer highways for the protection of our children and our children's children. Implementing the strategies in this Plan will lead to improved safety and an improved quality of life for all South Carolinians."

During the afternoon session at the conference, participants selected five key focus areas out of the SHSP for all safety partners to support through projects and strategies.

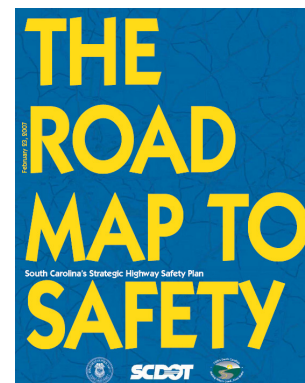
"By narrowing the focus to five areas, more resources can be devoted toward goal accomplishment," SCDOT Safety Director Terecia Wilson said. "All the safety partners will be joining in efforts to reduce fatalities and injuries for these types of crashes."

The five focus areas selected by conference participants are: Run-off-Road Crashes; Aggressive Driving; Sharing the Road with Large Trucks; Pedestrian/Bicycle/Motorcycle Safety; and improving timeliness and access to collision data.

Acknowledgement: Excerpts for this article were taken from Bob Kudelka's article in the SCDOT's Connector.



Terecia Wilson
SCDOT Safety



Download
your copy at
www.roadmaptosafety.us

SCDOT Safety Programs Receive National Honors

The Roadway Safety Foundation (RSF) and the Federal Highway Administration (FHWA) today recognized 15 local programs from 12 states across the country for excellence and innovation in operations, planning and roadway design to reduce fatalities and injuries on our nation's highways. Of the 15 programs recognized, two were from South Carolina.

South Carolina Department of Transportation's (SCDOT) Let 'Em Work, Let 'Em Live! Obey the Law Work Zone Safety Campaign: Between 2001 and 2002 South Carolina realized an increase in work zone crashes of nearly 30 percent. During that same time injuries increased by 23.7 percent clearly demonstrating a need for a focused, ongoing approach to reducing work zone incidents. In response, the SC DOT implemented an extensive work zone safety program from 2002 to 2005 that included a statewide public education campaign, worker training and stepped up enforcement, among other tactics. The result was a 39.2 percent reduction in crashes, a 44.1 percent reduction in injuries and a 50 percent reduction in fatalities.

South Carolina Department of Transportation's (SCDOT) Crash Reduction by Improving Safety on Secondaries (CRISOS) Program: In 2003 the SCDOT's CRISOS project began as a response to a significant safety problem on the state's rural, secondary roads. The mileage death rate for the state's secondary roads was over three times higher than for interstate highways in the state (3.42 versus .92 fatalities per vehicle mile traveled). The CRISOS project incorporates low cost, short-term engineering strategies with public education, emergency medical services and enforcement efforts to reduce traffic injuries and fatalities on state-maintained secondary routes with the highest crash severity rankings. Early preliminary results from six CRISOS-completed roads in 2006 showed a 47.6 percent decrease in fatalities and a 16.5 percent decrease in injuries from the five-year average from 1998-2002.



South Carolina Transportation Partnering Conference to be held in Spartanburg on December 2-5

For the first time, Spartanburg Area Transportation Study (SPATS) will host the South Carolina Transportation Partnering Conference at the Marriott Spartanburg Conference Hotel, Sunday, December 2 through Wednesday, December 5, 2007. This conference, hosted by the South Carolina Department of Transportation (SCDOT) and the SC Division Office of the Federal Highway Administration (FHWA) as the SCDOT Winter Conference in 2005, is a part of the State's continuous efforts to provide a safe and efficient transportation system for all modes of transportation. SPATS will be partnering with SCDOT and FHWA to provide attendees with the latest information on methods to improve accommodations for bicycles and pedestrians as well as, opportunities for shared information and coordination of activities between state and federal resource agencies and local planning organizations.

For more information visit <http://www.sctransportationpartners.org/>



Charles Dwyer Joins Earth Tech *Amy Skelding*

Charles T. Dwyer, PE, has joined Earth Tech's Charleston, South Carolina office as Program Director for the Transportation Group. Mr. Dwyer will be responsible for developing and expanding the company's business in the South Carolina transportation market at the municipal and state level.

Mr. Dwyer has more than 17 years of experience as a professional engineer specializing in transportation. Mr. Dwyer has been involved in numerous projects throughout the Southeastern United States. During the past eight years, he has been the South Carolina Department of Transportation Project Manager for the Cooper River Bridge Replacement project in Charleston, South Carolina. This \$700 million project involved two major design-build contracts including the new Ravenel Bridge which was delivered one year ahead of schedule.

Mr. Dwyer received his Bachelors of Science degree in Civil Engineering from the University of Florida, Gainesville. He is a licensed Professional Engineer in South Carolina and Florida, and recently completed the SCDOT Strategic Training for Transportation Agency Representatives (STTAR) leadership program.

Mr. Dwyer's appointment reaffirms Earth Tech's commitment to providing the best quality transportation engineering services to our clients.

Earth Tech Inc. is a global provider of a full suite of engineering, construction and operations services to the international transportation, water/wastewater, environmental, and facilities markets. Earth Tech employs some 7,000 talented people, delivering services to customers in 15 countries. Founded in 1970, Earth Tech is headquartered in Long Beach, Calif. More information on Earth Tech can be found at www.earthtech.com.



Charles Dwyer, PE
Earth Tech



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Andy Leaphart, PE



Andy Leaphart Named Assistant Deputy State Highway Engineer *Andy Leaphart*

Andy Leaphart has been named Assistant Deputy State Highway Engineer. He will assist the Deputy State Highway Engineer Clem Watson in day to day functions as well as focusing on major projects such as the 10-year District Review.

He joined SCDOT's Traffic Engineering section in 1992 and has worked in signing, marking, work zone traffic control, intersection improvements, and administration. He is a 2000 graduate of SCDOT's Strategic Training for Transportation Agency Representatives (STTAR) program and currently enrolled in the Certified Public Manager course for state employees.

Andy is a 1987 graduate of Batesburg-Leesville High School and received a Bachelor of Science degree in civil engineering from Clemson University in 1991. He is married to the former Marcie Dawn Wheeler of Charleston and they have two children, Austin 10 and Audrey 7. The Leapharts live in Lexington where they attend St. Stephen's Lutheran Church.

SC Evacuation Management Program Receives National Coverage in Article by Dick Jenkins *Mike Richards*

Mike Richards

The October issue of *Transportation Management and Engineering* contains a feature article on South Carolina's evacuation management program by Dick Jenkins, SCDOT's Traffic Management Engineer.

Dick has been a leader in the state's development of new evacuation routes that provide coastal residents and visitors with safe and effective means for traveling away from coastal areas threatened by damaging hurricanes.

At the SCDOT, Dick has been the driving force behind the development of our Intelligent Transportation System (ITS) and the State Highway Emergency Program.

Early on, Dick realized that the Department's ITS program could play a major role in monitoring the progress of coastal evacuations. Read the full text at <http://roadsbridges.com/Routes-to-the-ready-article8577> to see how the development of a coastal evacuation plan and the development of ITS have grown together in South Carolina



Dick Jenkins, PE
SCDOT Traffic



Hesha Gamble Obtains PTOE Certification

Hesha Gamble

Hesha N. Gamble, PE, PTOE, was recently certified as a Professional Traffic Operations Engineer. Certification as a Professional Traffic Operations Engineer™ (PTOE) is a powerful demonstration of requisite knowledge, skill and ability in the specialized application of traffic operations engineering. The certification process requires that the holder be a licensed professional engineer. Hesha is one of only seven licensed PTOEs in the state of South Carolina, and the only female. There are 1870 certified professionals in the United States.



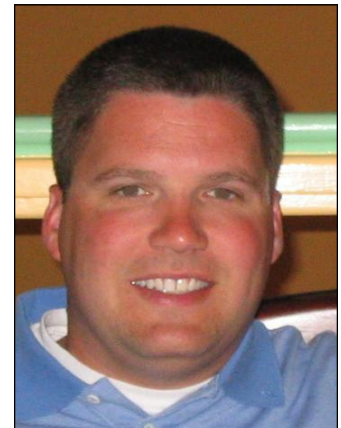
Hesha Gamble, PE, PTOE
Greenville County

Kurt Walters Returns to Traffic Engineering

Hesha Gamble

Greenville County has hired Kurt K. Walters as its new traffic engineer, bringing him back to the specialty he loves. For the past year, Kurt worked as the paving engineer for Greenville County; however, prior to coming to Greenville County, he worked for SCDOT at Headquarters in the signing/marketing unit of Traffic Engineering for 8 years. Kurt also spent some time as a stormwater engineer with Anderson County. Kurt has a BS degree in Civil Engineering from The Citadel (1995).

Kurt recently joined ITE and the South Carolina Section.



Kurt Walters
Greenville County

Tucker Creed Joins SCDOT Traffic Engineering

Mike Richards

SCDOT Traffic Engineering has hired Tucker Creed as a associate engineer in the Work Zone Traffic Control Unit. A 2005 engineering graduate of The Citadel, Tucker previously was employed by F&ME Consultants. While at F&ME, Tucker gained valuable knowledge in geotechnical engineering and construction services.

Tucker is a new member of the South Carolina Section of ITE and is eager to get involved.



Tucker Creed, EIT
SCDOT Traffic

Eric Tripi to Start Office in Charleston for Iteris

Eric Tripi



Eric Tripi, PE, PTOE
Iteris, Inc

Iteris, a technology leader in ITS, signal systems and sensors for surface transportation, has expanded to the Low Country. Eric Tripi, P.E., PTOE will be Director of Operations for Iteris in South Carolina. He specializes in traffic signals (design, timing, warrants, and optimization), traffic impact studies, intersection analysis/design, and traffic operations.

Prior to joining Iteris, Mr. Tripi worked as Director of Traffic Engineering in South Carolina for Wilbur Smith Associates. He was responsible for project management and marketing and business development for the traffic engineering practice.

Mr. Tripi received a B.S. degree in Civil Engineering from Michigan State University and an M.S. degree in Civil Engineering from the University of Nebraska–Lincoln. He is a registered Professional Engineer in several states and is a certified Professional Traffic Operations Engineer.

At Iteris, services range from making recommendations on a single intersection to designing and managing components of one of the largest freeway deployments in the United States. Iteris, with offices nationwide, has engineers with experience in traffic engineering and planning, systems integration, software development, computer science and communications. Iteris can implement advanced technologies and integrate complex systems while at the same time extend the life of legacy systems and maintain interfaces with equipment installed years ago. From basic traffic studies to complicated ITS projects, Iteris has the experience to do it all.

For additional information, please contact Eric at either (843) 693-3477 or at ejt@iteris.com.



Visit us online at
www.iteris.com

Teaching Traffic at The Citadel *Eric Tripi*

I was fortunate enough to be given the opportunity to serve as an Adjunct Professor this past fall semester at The Citadel. I took over Dr. Jeff Davis' undergraduate CIVL 305 class, Traffic and Transportation Engineering, while he was on sabbatical. I have to admit that I now have a new appreciation for the teaching profession! There is a lot of work involved in preparing lesson plans, tests, grading, etc.

I really enjoyed teaching the course and I learned a lot as well. I had always wanted to give teaching a shot and I was not disappointed. It was so rewarding to be able to share some of my knowledge and experience with students. As much as possible, I tried to teach the various topics from a real-world perspective; sometimes textbooks can get a bit theoretical... I feel that the college professors I learned the most from had worked professionally in the traffic and transportation field before they taught - this I believe was truly a benefit for me as a student.

I hope the students enjoyed the class as much as I did and hopefully I was able to convince a few to become traffic engineers!



The Journey *Debayan Roy*

“Country Roads, Take me Home” – John Denver.

Only in this case it was the Wright-Brothers-invented-machine that took me home – to India. After more than thirty hours of grueling travel and tiresome layovers, I finally reached my hometown. Kolkata, aptly called “City of Joy”, was already buzzing with energy, color and vibrancy as I stepped out of the airport early morning. On my way home, I could have already counted millions of heads making ways to their respective workplaces – a sight which I nearly forgot!

Kolkata is *the* business center of eastern India. It was once the capital of India. Home to more than 14 million people, Kolkata has always been plagued by traffic congestion. At some of the busiest intersections, the average vehicle delay exceeds 10 minutes. Part of the problem is that most of the roads are operating at over-capacity during peak times. Since the roadway network in Kolkata was developed primarily during the British rule, most of the roadways are quite narrow and surrounded by residential and commercial buildings on both sides. Widening of these roadways would result in the demolition of several thousands of homes and businesses. Hence, the government is coming up with different mitigation measures – building overpasses, improving and expanding transit systems and building new city centers. Since my last visit to Kolkata (about 2 years back), at least 3 new overpasses were built in the different parts of the city, several new bus routes implemented and new trains put into service. Transit systems are the most preferred modes of transportation for the people in the city. All areas of the city are served by several thousands of different bus routes each day. The trains mostly connect different surrounding suburbs with the city and also serve different important areas of the city. In addition, subway system (called *Metro Rail* in Kolkata) and trolley cars or streetcar system (called *Tram*) serve the interiors of the city. The *Metro* is a very popular and efficient transportation system in Kolkata. The frequencies of these buses, trains and metros at most of the major stoppages/stations are awe-inspiring – mostly between 30 seconds to a few minutes during peak times. In spite of having such significant transit systems and new roadway developments, the city traffic comes to a crawl during peak times – mostly due to the recent economic boom in the city. A rather interesting approach was recently adopted by the government – to expand the boundaries of the city to include other small surrounding suburbs and to slowly distribute the business centers to these places. *Rajarhat* is one such place. It is now being developed to host some of the major businesses in the city and being planned to house several hundreds of residential high-rise buildings.

The time I visited Kolkata (middle of October) was also the time of *Durga Puja* (*Puja* means worship) – the most revered festival in Kolkata. The festival celebrates the homecoming of Goddess *Durga* (daughter of the *Himalayas*) after her glorious victory over *Mahisasura*, the demon. The festival is traditionally celebrated for five days as a remembrance of the great battle and subsequent victory of *Durga*. The goddess is generally staged in a temporary temple (called *Pandal*) and is worshipped for five days. *Durga Puja* is a community festival. The greatest aspect of this festival is that it brings people together – not only family members but friends and community residents also come together and spend most of their time at the *Pandal* during this celebration and engage in various spiritual and communal activities.

Come November and it was soon time for me to bid goodbye to my hometown. As I boarded the flight from Kolkata I kept on wondering why I was feeling sad. Was that the food that I was missing (Oh yeah!)? Was that the celebration? Was that the buzz of the city? Then I thought I heard my (inner) voice shout out loud – It is the people, you stupid!



Debayan Roy, EIT





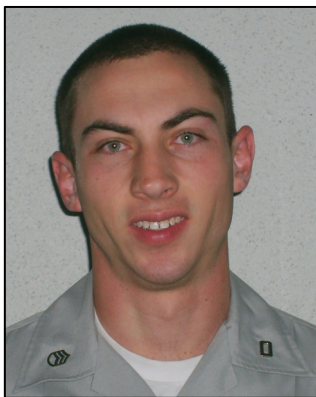
Gaye Sprague, PE
Sprague and Sprague

Sprague & Sprague
CONSULTING ENGINEERS

SCSITE Awards Three Scholarships *Gaye Sprague*

Thanks to the generosity of our members and the golf outing organizational skills of Mike Ridgeway and Don Turner, we are able to award three scholarships this year. The awards will be made at the December meeting. Please read about this year's recipients below. We also have an update from one of original scholarship recipients Rick Rieff. Rick was a senior at Clemson when he was presented the Stafford-Clark scholarship.

Thanks to everyone who has helped make the scholarship program possible—Mike and Don, Colin and Howard who review applications every year, the professors who encourage the students to apply, the SCSITE officers who take care of the money, and all the members who have bought auction items, played golf, and sponsored the golf tournament. Please read about this year's recipients and Rick. They are all fine young people who deserve our support.



Brian Rhett

Brian Rhett—The Citadel

My name is Brian Rhett and I am a junior civil engineering major at The Citadel. I am an active member in The Citadel's American Society of Civil Engineers chapter, and he is also a member of the engineering honor's society, Tau Beta Phi. I also participates in The Citadel's G.U.I.D.E. program, which involves tutoring and mentoring underclass civil engineering students.

Upon graduation, I plan to attend Clemson University to earn a graduate degree in transportation systems. My interests include airport design and efficiency along with port and harbor design.

Many thanks to SCSITE for awarding me this scholarship.



Stephen Sprague— University of South Carolina

My name is Stephen Sprague and I am from Dallas, TX. I will be graduating this December from the University of South Carolina with a bachelors degree in Civil and Environmental Engineering, and will be attending Texas A&M University in January to pursue my M.S. in Transportation while working for the Texas Transportation Institute's (TTI) Air Quality and Alternative Energy Division.

I originally came to USC just to play soccer but after entering the engineering program, found I had a new passion. I got interested in transportation after completing an internship in Dallas working in Advanced Planning for Halff Associates. That interest was peaked even more after taking a transportation class taught by Dr. Andrew Nichols, a former professor here at USC. Dr. Nichols was my P.I. on an undergraduate research project which focused on alternative energy and emissions. Since Dr. Nichols departure, I have been working with Dr. Metin Cetin, the only remaining transportation faculty at USC, on freight transportation patterns in the Central Midlands. Both professors' invested time in me has allowed my passion for transportation engineering to grow tremendously and for that I am truly thankful.

I cannot thank the SCITE as well as its members enough for being selected this year as one of its scholarship recipients. I hope to move back to South Carolina after I complete my graduate work, but couldn't turn down an offer to conduct research at TTI, one of the premier transportation institutes in the world.



Stephen Sprague



Brian Battey—Clemson University

My name is Brian Battey and I am a Transportation Engineering student currently enrolled as a sophomore at Clemson University. I am a member of ASCE and ITE and am currently participating in a Creative Inquiry project focusing on inventorying and improving pedestrian facilities on Clemson's campus. By serving as the president of Clemson's chapter of Alpha Lambda Delta Freshman Honor Society, a Supplemental Instruction (SI) Leader, a member of Omicron Delta Kappa Leadership Honor Society, and a participant in Clemson's Dixon Fellows Program, I hope to gain experience in leadership and team relations that will aid me in my future career. My interest in the field of transportation stems from a longstanding fascination with road networks, interchange and intersection layouts, and traffic patterns; I loved playing SimCity as a kid and working out how to create the most efficient road networks for large cities. I am also excited about becoming part of a solution to the ever-increasing traffic issues plaguing urban and suburban areas. My professional goal has always been to find a career that had a meaningful and beneficial impact on society while remaining personally fulfilling, and I believe transportation engineering will allow me to achieve this goal.



Brian Battey



Thank you SCSITE!!

Former Scholarship Recipient Thrives in Florida

Richard Reiff



Richard Reiff, PE, PTOE
Kimley-Horn & Associates

I graduated from Clemson University in 2001 with a Bachelors of Science degree in Civil Engineering, and then continued my graduate studies under Dr Wayne Sarasua through 2002, obtaining a Masters of Science degree with a transportation focus. During my Masters studies, I was involved in several projects, including the development of forecasting parameters for cities in rural counties in South Carolina, which included 12-hour origin-destination license plate surveys outside of Newberry and Union, South Carolina. In addition, I was involved with the Interstate Work Zone Safety Study, which analyzed the behavior of the initial queue caused by the closure of lanes along Interstates in South Carolina.



After graduating from Clemson, I joined Kimley-Horn and Associates, Inc. (KHA) in Tampa, Florida, a full-service Civil Engineering firm with a significant transportation practice. While in Tampa, I was exposed to many aspects of traffic operations and transportation planning and was involved in projects that ranged from intersection/corridor safety audits to site impact traffic studies.

In 2005, I became a registered Professional Engineer and moved to Cape Coral to further KHA's transportation presence in Southwest Florida. I am now responsible for numerous projects for both private developers and municipalities, and recent efforts include a traffic study for a development of regional impact (DRI), which included analysis of 30+ intersections and a Trip Generation Study to validate land use code 820 of ITE *Trip Generation*, 7th Edition (2003) for a proposed 2 million square-foot retail center.

I just recently obtained my Professional Traffic Operations Engineer registration through ITE, and am looking forward to future opportunities that will allow me to practice transportation engineering back in South Carolina!

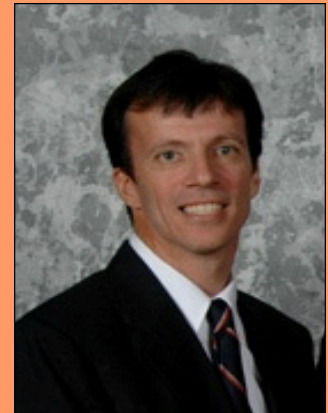


Kimley-Horn
and Associates, Inc.

News from the Clemson Student Chapter

Wayne Sarasua

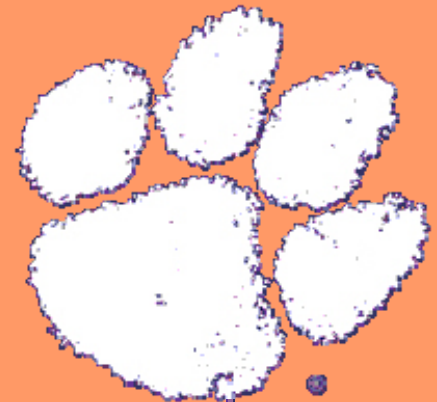
The Clemson Student Chapter continues to be active. We've had 4 meetings this Fall. Jennifer Bihl from Kimley-Horn gave a great talk at one of our meetings. Our other meetings focused on ITE business. Our big service/professional activity this fall was doing pedestrian counts for the City of Greenville. Several students participated in this activity counting peds at 4 downtown Greenville intersections during a number of weekday and weekend periods. Another activity was a major fundraisers. We've been helping with traffic control at Clemson football games. Right now, we're gearing up for our big trip to the Transportation Research Board's Annual Meeting in Washington, D.C. in January. The students make it a point to mingle with ITE Brass at ITE headquarters while in DC. Our student chapter also sponsored a Fall social that was held at Jennifer Ogle's neighborhood club house. The students feasted on Thanksgiving fare including turkey, stuffing, sweet potatoes, and pumpkin pie. The spring semester will be a very busy one. Several speakers are scheduled to talk. The chapter will also be an active participant in the Southern District ITE meeting that will be held in Charleston.



Wayne Sarasua, PhD, PE
Clemson University
ITE Student Chapter
Advisor



Member of Clemson's ITE Student Chapter collect data using Clemson's transportation research surveillance van.



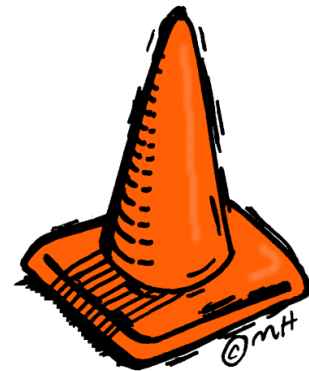
City of Greenville Traffic Operations Engineer

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



Lexington County Engineer/Public Works

Under limited supervision, performs directing, supervising, operating and administrating duties in the Engineering Division of the Public Works Department. Oversees design roadway, drainage, and development of projects. . Issues work orders for corrective actions as needed. Maintains General Contractor's License on behalf of Lexington County for in-house construction and renovation projects up to \$750,000. Prepares specifications for acquisition of goods and services. Performs related professional, technical, administrative and supervisory work as required. Reports to the Public Works Director/Assistant County Administrator. Requires a Bachelor's degree in civil engineering supplemented by five to six years of progressively responsible experience in public works engineering and operations; or an equivalent combination of education, training and experience that provides the required knowledge, skills and abilities. South Carolina Professional Engineer's license required.

Salary:\$67,433 Closing Date: 12/31/2007

Apply on line or in person at:
Lexington Employment Security Commission Workforce Center
714 South Lake Drive, Suite 140
Lexington, SC 29072

www.lex-co.com



City of Myrtle Beach Engineer

Public Works Department/Engineering Division. Directs the activities and staff for the Engineering Division, Construction and Traffic Engineering; prepares an annual budget and monitors expenditures; provides professional engineering consultation for City projects; establishes and maintains standards for construction; assures compliance with all relevant laws, regulations and ordinances; and responds to inquiries and complaints from a variety of groups. Requires any combination or experience equivalent to graduation from an accredited college or university with major course work in civil engineering or closely related field and a minimum 5 years experience in public works, civil design, construction, and operations. Must possess a Professional Engineer license and a valid driver's license. EEO/H. **Position open until filled.**

Obtain applications online at the following address:

<http://www.cityofmyrtlebeach.com/on-lineapplications.html>



NEWSLETTER ARTICLES WANTED!

Advertise job opportunities, announce new hires / promotions, discuss interesting projects, or tell the section of something interesting you have going on outside of work. Send all articles, questions, or comments to Jae Mattox at mattoxjh@scdot.org.

This newsletter is for the benefit of our section so please do your part to make it a success!



2007 Section Officers

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Membership: Carol Jones, SCDOT, jonesvc@scdot.org

Nominations/Awards: Wayne Sarasua, Clemson Univ., sarasua@clemson.edu

Scholarship: Gaye Sprague, Sprague and Sprague, gayerprague@cs.com

Social: Don Turner, SCDOT, turnerd@scdot.org

Clemson Student Chapter Advisor: Wayne Sarasua, sarasua@clemson.edu

The Citadel Student Chapter Advisor: Jeff Davis, jeff.davis@citadel.edu

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. Return to Jae Mattox. 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

Our new webmaster is Debayan Roy so please contact him at droy@wilbursmith.org with comments or questions.

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.