



Office of  
Materials & Research

# Research Topic Solicitation Meeting

April 22, 2008  
Columbia, SC

## Final Summary Report

Prepared by:

**Sandra Priddy, Program Manager**  
Transportation Technology Transfer Service  
Civil Engineering Department  
Clemson University  
Clemson, SC 29634-0911



## Table of Contents

Introduction .....	1
Format .....	1
Agenda.....	2
Findings.....	3
Observations .....	3
Summary of Breakout Group Findings .....	3
Table 1. Highlighted Topics Presented in the Closing Plenary Session.....	4
Breakout Sessions	
Construction/Materials .....	6
Maintenance/Bridge Maintenance .....	10
Traffic/Safety .....	12
Design.....	15
Hydrology .....	17
Project Development/Planning .....	19
Business Operations .....	21
Appendix A .....	23

## **Introduction**

The South Carolina Department of Transportation (SCDOT) Research Topic Solicitation Meeting was held April 22, 2008 in Columbia, SC. The SCDOT contracted with the Transportation Technology Transfer Service (T3S) at Clemson University to provide the logistical and administrative support for the meeting.

This meeting, the third of its type conducted by SCDOT, was intended to market the research program, to identify a wide array of potentially beneficial research topics, and to develop a prioritized list of possible research topics for consideration by the SCDOT Research and Development Executive Committee (RDEC).

Over 100 people, including representatives from SCDOT, FHWA, USGS, academia, and industry, participated in the meeting. A list of all participants is shown in Appendix A.

## **Format**

The meeting began with a plenary session of all participants during which the Office of Materials and Research (OMR) provided an overview of the SCDOT research program. Each participant then attended one of seven breakout sessions, each on a different subject area of potential research interest for the SCDOT. The seven breakout groups included:

- ❑ Construction/Materials
- ❑ Maintenance/Bridge Maintenance
- ❑ Traffic/Safety
- ❑ Bridge/Road Design
- ❑ Project Development/Planning
- ❑ Business Operations
- ❑ Hydrology

A moderator from the OMR was assigned to each breakout group. The moderators and participants for each breakout group are shown with the summary of each breakout session later in this report. The agenda for the meeting is shown in Exhibit 1.

Each moderator decided how he or she would conduct the individual breakout sessions. However, the general format for each breakout group was to begin by brainstorming potential research topics. The topics were then discussed to ensure that all participants understood what was intended by the proposed topic. Then, two voting techniques, i.e., multi-voting, and 10-4 weighted voting, were used to identify and prioritize the most important topics.

## SCDOT Research Topic Solicitation Meeting

April 22, 2008

Columbia Metropolitan Convention Center

8:30–9:00		<b>Registration</b>
9:00–9:15	<i>Lexington A</i>	<b>Welcoming Remarks</b> Clem Watson, <i>Chief Engineer for Operations</i> Milt Fletcher, <i>Materials and Research Engineer</i>
9:15–9:35	<i>Lexington A</i>	<b>Review of SCDOT Research Program</b> Mike Sanders, <i>Research Engineer</i> Terry Swygert, <i>Assistant Research Engineer</i>
9:45–10:15	<i>Concourse</i>	<b>Break</b>
10:15–12:00	<i>Breakout Rooms</i>	<b>Breakout Session I</b> (see breakout assignment sheets)
12:00–1:00	<i>Richland B&amp;C</i>	<b>Lunch</b>
1:00–2:30	<i>Breakout Rooms</i>	<b>Breakout Session II</b> (see breakout assignment sheets)
2:30–3:00	<i>Concourse</i>	<b>Break</b>
3:00–3:50	<i>Lexington A</i>	<b>Summary Reports from Moderators</b>
3:50–4:00	<i>Lexington A</i>	<b>Closeout</b> Mike Sanders, <i>Research Engineer</i>

### Breakout Rooms

Construction/Materials	<i>Congaree B</i>
Design—Road/Bridge	<i>Congaree A</i>
Traffic/Safety	<i>Lexington A</i>
Project Development/Planning	<i>Lexington B</i>
Business Operations	<i>Carolina A</i>
Hydrology	<i>Carolina B</i>
Maintenance/Bridge Maintenance	<i>Richland A</i>

### Exhibit 1. Agenda

## **Findings**

Once the breakout sessions were completed, a final plenary session was held in which the moderators presented a few of the highest priority topics from each breakout group. The prioritized projects that were presented by each moderator are shown in Table 1. Additional high priority topics are also included in the summaries of each breakout group later in the report.

## **Observations**

The format for the meeting worked well. The initial plenary session presentation by the OMR provided useful information and background for the participants before they began their breakout group activities.

T3S staff visited each of the breakout groups to observe how the process was working. Each of the groups identified a number of research topics through their brainstorming efforts. Each group was then able to develop a prioritized list for consideration by the SCDOT RDEC.

There appeared to be a good deal of interest in the results from the breakout groups. It is not unusual to lose a large percentage of the audience for the closing session of any meeting. However, a large number of the participants remained to hear the breakout reports during the final plenary session. The high attendance indicates that the participants were interested in hearing the priority research topics from the various breakout groups.

## **Summary of Breakout Group Findings**

The following sections include a summary for each of the breakout groups. The summaries include the following for each breakout group:

- ❑ Moderator.
- ❑ Breakout group participants.
- ❑ Priority topics identified.
- ❑ All topics identified during the brainstorming session.

**Table 1. Highlighted Topics Presented in the Closing Plenary Session**

Topic	Champion
<b>Construction/Materials</b>	
The Best Way to Provide Information to Construction Offices, Districts, HQ, Contractors, Utility Companies, and the Public all in One Schedule	Christy Hall
Warm Mix Asphalt (WMA)	Merrill Zwanka
Evaluation of Aggregate Gradations vs. Concrete Mixtures – Performance Evaluation (Strength, Durability, etc.)	Milt Fletcher
Material Pricing Indexing—Steel, Aggregate, Concrete for Structures, etc.	Charles Eleazer
<b>Maintenance/Bridge Maintenance</b>	
Study on the Effect of Fixed Objects and the Rate of Highway Fatalities	Phillip Brooks
Rest Area Strategies	David Cook
Study of the Rate of Deterioration of Bridges and Pavements as Affected by Trucks	Lee Floyd
<b>Traffic/Safety</b>	
Road Defects Related to Claims-Lawsuits (Study on Vehicle After Market Modification (ie: narrow tires) and Resulting in Claims/Lawsuits)	Brett Harrelson
Why Do We Have a High Fatality Rate on Rural Roads in South Carolina (Vehicle Run-off-the-Road Research)	Terecia Wilson
Demographic Study of Drivers Involved in Crashes (Demographic Study of Bikers/Pedestrians Involved in Crashes)	Tom Dodds
<b>Hydrology</b>	
Storm Water Monitoring at a Few Select (2-4) Urbanized Maintenance Yards	Peter Reinhart
Urban Regional Regression Equations for Peak Flow	Wayne Corley
Regional Relations from a Stream Flow Measurement Database	Randy Williamson
At Site Measurements of Bridge Piers and Abutment Scour	Wayne Corley

**Table 1. Highlighted Topics Presented in the Closing Plenary Session  
(continued)**

Topic	Champion
<b>Design—Roadways/Bridges</b>	
Improvement to ADRS Curve Development and Selection	Nick Harmon
Accelerated Bridge Construction in SC	Barry Bowers
Investigation of Lane Width and Two-way Left Turn Lanes	Steve Gantt
<b>Project Development/Planning</b>	
Public Education K-12	Randy Williamson
Value Engineering SCDOT Preconstruction Process	Robert Pratt
Project & Contract Manager Development and Certification Strategy	Matt Lifsey
Privatizing Personnel Recruiting	John Walsh / Mary Gail Monts-Chamblee
<b>Business Operations</b>	
SC Public Transportation Return on Investment Study	Doug Frate/Roy Tolson
Determining Unit Price Adjustments for Steel, Aggregate, and Cement Construction Items	Greg Peck
Evaluation of the "Greenness" of SCDOT Projects	Carl Chase
Feasibility of Establishing SCDOT Grants Office/Dept.	Susan Johnson
Meeting Public Transit Needs as Related to Tourism and Retirement	Roy Tolson

**Construction/Materials Breakout Session**

**Moderators:** Milt Fletcher, SCDOT  
 Merrill Zwanka, SCDOT

**Participants:**

Mark	Attaway	SCDOT
Neal	Barber	Hanson Aggregates
Kyle	Berry	SCDOT
Scott	Bowles	FHWA
Henry	Cross	SCDOT
Robert	Dickinson	SCDOT
Charles	Eleazer	SCDOT
Christy	Hall	SCDOT
David	Herndon	SCAPA
John	McCarter	SCDOT
Marty	McKee	Carolinas AGC
Brad	Putman	Clemson University
Danny	Shealy	SCDOT
Dennis	Townsend	SCDOT

*(Continued on next page)*

**Construction/Materials Breakout Session (continued)**
**Priority Topics Identified:**

Topic	Champion
1. The Best Way to Provide Information to Construction Offices, Districts, Headquarters, Contractors, Utility Companies, and the Public All in One Schedule	Christy Hall
2. Warm Mix Asphalt (WMA)	Merrill Zwanka
2. Evaluation of Aggregate Gradations vs. Concrete Mixture-Performance Evaluation (Strength, Durability, etc.)	Milt Fletcher
2. Material Pricing Indexing—Steel, Aggregate, Concrete for Structures, etc.	Charles Eleazer
5. How to Build Roads That Last—FDR with Cement	Kyle Berry
6. Increased RAP Percentages in HMA	Merill Zwanka
6. Utility Cost—Railroad Crossing Upgrades and Others	Mark Attaway
8. Evaluation of MSE Wall Backfill Specifications Including Alternate Reinforcement Materials	Henry Cross
8. Evaluation of OGFC Properties—Performance, Design, Construction, Rehabilitation, Winter Maintenance Issues, (Snow & Ice), Life-Cycle Cost Analysis, Safety	Milt Fletcher
10. Evaluation of Aggregates in Pavement Preservation Techniques—Lightweight vs. Conventional Aggregate, Microsurfacing, Etc.	Robert Dickinson
10. Directional Boring—HDPE Pipe, Soil Evaluation	Mark Attaway

*(Continued on next page)*

## Construction/Materials Breakout Session (*continued*)

### All Topics Identified During Brainstorming:

How to Build Roads That Last—FDR with Cement

Minimize Ditch Sizes Based on Soil Characteristics

Use of Polypropylene Fibers for Concrete Reinforcing in Approach Slabs

Use of Plastic Chairs or Bar Supports in Bridge Structures

The Best Way to Provide Information to Construction Offices, Districts, Headquarters, Contractors, Utility Companies, and the Public All in One Schedule

Warm Mix Asphalt (WMA)

Increased RAP Percentages in HMA

Evaluation of Aggregates in Pavement Preservation Techniques—Lightweight vs. Conventional Aggregate, Microsurfacing, etc.

Soil and Base Moisture vs. Field Compaction Results

Utility Costs—Railroad Crossing Upgrades and Others

Evaluation of MSE Wall Backfill Specification—Including Alternate Reinforcement Materials

Evaluation of Seeding Mixtures for Different Soil Types in SC (specification is being revised)

Evaluation of Ride Requirements for Maintenance Resurfacing Projects

Directional Boring—HDPE Pipe, Soil Evaluation

Evaluation of Aggregate Gradations vs. Concrete Mixture—Performance Evaluation (Strength, Durability, etc.)

Material Pricing Indexing—Steel, Aggregate, Concrete for Structures, etc.

Evaluation of OGFC Properties—Performance-Design, Construction, Rehab, Winter Maintenance Issues-Snow & Ice, Life-cycle Cost Analysis, Safety

In House Training for Surveyors—Preconstruction and Construction

Use of Concrete Maturity Meters in Construction

Evaluation of Rubblization Techniques of PCC Pavement

Evaluation of PCC Pavement Inlays in HMA Pavements

Real Cost LCCA Inputs

*(Continued on Next Page)*

**Construction/Materials Breakout Session (*continued*)****All Topics Identified During Brainstorming (*continued*):**

Infrastructure Inventory/Management System

Behavioral Safety Approaches for Work Zone Crews, and Drivers

Contractor's Safety Record—How to Measure It and How Does it Affect Work—Input for Future Contractor Evaluation

Evaluation of Material Properties in Mechanistic Design of Pavements

Evaluation of High Friction Materials for Maintenance Application—Low Cost, High Cost

Evaluation of Butt Splices of Reinforcing Steel—Mechanical, Welded—QPP and QPL

Evaluation of "Greenness" of DOT Projects

**Maintenance/Bridge Maintenance Breakout Session**

**Moderators:** Chad Hawkins, SCDOT  
Caleb Gunter, SCDOT

**Participants:**

Lansford	Bell	Clemson University
Michael	Black	SCDOT
Barry	Bowers	SCDOT
Curtis	Brice	SCDOT
Phillip	Brooks	SCDOT
Juan	Caicedo	University of SC
Sean	Connolly	SCDOT
David	Cook	SCDOT
Todd	Cook	SCDOT
Lee	Floyd	SCDOT
Bryan	Jones	SCDOT
Brad	Latham	SCDOT
David	Law	FHWA
Lucero	Mesa	SCDOT
Yuanchang	Xie	SC State University

**Priority Topics Identified:**

Topic	Champion
1. Study of the Effect of Fixed Objects and the Rate of Highway Fatalities	Phillip Brooks
2. Rest Area Strategies	David Cook
3. Study of the Rate of Deterioration of Bridges and Pavements Affected by Trucks	Lee Floyd
4. Fee Schedule for Encroachment Permits	Michael Black
5. Ranking of Preservation Practices	Todd Cook
6. Attraction, Retention and Training of Skilled Maintenance Workers	Jim Feda/David Cook

*(Continued on Next Page)*

## Maintenance/Bridge Maintenance Breakout Session (*continued*)

### All Topics Identified During Brainstorming:

Attraction, Retention & Training of Skilled Maintenance Workers  
Truck Traffic vs. Rate of Deterioration and Fees for Overweight Trucks Including Variances  
OMAR Electronic Library (New Products and Best Practices)  
Addressing Retrofitting Strategies in SC  
Cost-Effective Structural Systems for Rapid Inspection and Maintenance  
Feasibility of R/W - Utilities Acquisition (Planning)  
Mitigation for Environmental Impacts Assessment of Culverts in SC (DNR-Fish Migration Perched Culverts)  
Combining GPS and Image Processing to Identify Pavement Distress  
Assessment and Implementation of Ultra-High Performance Concrete (Prestress)  
Accelerated Bridge Construction in SC  
Strategies for Optimizing Maintenance Crew Productivity  
Permit Fees in Conjunction with Variances & Impacts  
Guidelines for Directional Drilling  
Fee Schedule for Encroachment Permits (Recoupment of Engineering & Inspection)  
In-House Ranking of Bridge Patching Compounds—Cost/Effectiveness  
Rest Area Strategy  
Optimal Cement Rate for Cement Modification  
Fixed Objects and Fatality Rates (Rural and Interstate)  
Funding for Maintenance  
De-Icing of OGFC (Best Practices)  
Optimize Maintenance Activities for Rural/Urban Areas  
Management of Roadside Vegetation  
Litter Control Strategies  
Analysis of Effects of Policies and Policy Changes  
Ranking of Preservation Practices

## Traffic/Safety Breakout Session

**Moderators:** Mike Sanders, SCDOT  
Cliff Selkinghaus, SCDOT

### Participants:

Julie	Barker	SCDOT
Dan	Campbell	SCDOT
Mecit	Cetin	University of SC
Robert	Clark	SCDOT
Tom	Dodds	SCDOT
Jim	Garling	FHWA
Brett	Harrellson	SCDOT
Philip	Pidgeon	Clemson University
Joey	Riddle	SCDOT
Wayne	Sarasua	Clemson University
Mike	Sawyer	SCDOT
Tony	Sheppard	SCDOT
Todd	Steagall	SCDOT
Elli	Walters	Clemson University
Tom	Whitney	SC State University
Jo Ann	Woodrum	SCDOT

*(Continued on next page)*

**Traffic/Safety Breakout Session (*continued*)**
**Priority Topics Identified:**

Topic	Champion
1. Road Defects Related to Claims/Lawsuits (Study on Vehicle After Market Modification (ie: Narrow Tires) and Resulting in Claims/Lawsuits)	Brett Harrelson
1. Measurements of Congestion Indexing	Tony Sheppard
3. Why Do We Have a High Fatality Rate on Rural Roads in South Carolina (Vehicle Run-off Road Research)	Terecia Wilson
3. Demographic Study of Drivers Involved in Crashes (Demographic Study of Bikers/Pedestrians Involved in Crashes)	Tom Dodds
5. Improving Intersection Safety With Innovative Collision Avoidance Systems (Signalized and Non-Signalized)	Mike Sawyer
6. Effectiveness of Overhead Flashers	Joey Riddle
7. Evaluation of Safety Improvement Team Work Zone and Speed Enforcement Campaign	Mike Sawyer
7. Benefit Cost Analysis of Traffic Adaptive vs. Traffic Response Signals	Carol Jones
9. Website for Road Users Assessment on Traffic Control Measures (Strategy for Road Users Re-education)	Terecia Wilson
9. Development of Standardized Operations of Pedestrian Signals for the Visually Impaired	Dan Campbell

*(Continued on next page)*

## Traffic/Safety Breakout Session (*continued*)

### All Topics Identified During Brainstorming:

Why Do We Have a High Fatality Rate in SC on Rural Roadways  
Demographic Study of Drivers Involved in Crashes  
Improving Signalized Intersection Safety with Innovative Collision Avoidance System  
Public Attitudes Towards Automated Enforcement for Speed—Red-light Violation  
Measurement of Bicycle Usage in Communities  
Collision Avoidance System for Non-signal Intersections  
Measurement of Congestion Indexing (benchmark)  
Evaluation of Safety Improvement Team Work Zone and Speed Enforcement Campaign  
Methods to Estimate Travel Time from Vehicle Detector Data  
Benefit Effectiveness of (SIT) vs. Off Duty Law Enforcement  
Vehicle Run-off Research Study  
Speed Reduction Study Survey  
Evaluation of Drone Radar Program  
Road Defects Related to Claims-Lawsuits  
State Towing Incentives (Clearance Times) vs. Rotational Towers  
Development of Standardized Operation of Pedestrian Signals for the Visually Impaired  
Automatic Detection vs. Manual Operation for Pedestrians  
Assessment of Signalized Intersection Performance (cost analysis) Automation vs. Manual  
Benefit Cost of Traffic Adaptive vs. Traffic Response Signals  
Evaluation of Countdown Pedestrian Heads -Related to Vehicle Crashes-Severity  
Website for Road Users Assessment on Traffic Control Measures  
Strategy for Road User Reduction  
Computer Vision Based Work Zone Intrusion System Alarm  
Traffic Data Monitoring with PTZ Cameras  
Benefit of ITS in Reducing Lane Closure Restrictions  
Survey of Traffic Safety Culture in South Carolina  
Use of Simulator for Driver Behavior and Design  
Solar Powered Roadway Lighting

**Design Breakout Session**

**Moderator:** Mike Lockman, SCDOT

**Participants:**

Bener	Amado	SCDOT
Steve	Gantt	SCDOT
Nick	Harmon	SCDOT
Ken	Johnson	FHWA
Mark	Kwayisi	SCDOT
Chris	Lacey	SCDOT
Doug	McClure	SCDOT
Ben	McKinney	SCDOT
Bryant	Nielson	Clemson University
Dimitris	Rizos	University of SC

**Priority Topics Identified:**

Topic	Champion
1. Improvement to ADRS Curve Development and Selection	Nick Harmon
2. Accelerated Bridge Construction in SC	Barry Bowers
3. Investigation of Lane Width and Two-way Left Turn Lanes	Steve Gantt

*(Continued on next page)*

## Design Breakout Session (*continued*)

### All Topics Identified During Brainstorming:

Improvements to ADRS Curve Development and Selection

Methods for Tree Survivability

Driving Simulators as a Road Design Tool (3-D simulator) Phase I Feasibility Study

Seismic Investigation of Interaction of Pile and Precast Cap Connection

Accelerated Bridge Construction (may include D)

Maturity Meters for Concrete

Cost Effectiveness of SUE on SCDOT Projects

Investigation of Lane Widths and TWLTs

Evaluation of Low Cost Treatments for Curves and Intersections (in-house)

Vibration Monitoring During Bridge Monitoring During Bridge Foundation Construction (in-house)

Lighting as Related to Intersection Design and Safety Improvements

Assessment and Implementation of Ultra High Performance Concrete

Design Vehicle for Self Propelled Cranes

40/50' Precast Deck Systems—Effectiveness of Post Tensioning

Cost Effectiveness of Structural Systems for Rapid Inspection and Maintenance

Evaluation of Super Elevation on Secondary Roads

Use of Geosynthetics to Reduce/Eliminate Muck Excavation and Develop QPL Methods to Determine Where Needed (in-house)

Testing of Back Fill for MSE Wall (in-house)

Effectiveness and Efficiency of Scuppers and Outfalls at Bridge Ends

Length of Receiving Lanes for Double Left Turn Lanes

### Hydrology Breakout Session

**Moderator:** Terry Swygert, SCDOT

**Participants:**

Catherine	Blackwell	FHWA
Stan Bland	Bland	SCDOT
Wayne	Corley	SCDOT
Jon	Goodall	University of SC
Abdul	Khan	Clemson University
Noel	Hurley	USGS
Charlie	Smoak	SCDOT
Ray	Vaughan	SCDOT

**Priority Topics Identified:**

	<b>Topic</b>	<b>Champion</b>
1.	Storm Water Monitoring at a Few Select (2-4) Urbanized Maintenance Yards	Peter Reinhart
2.	Urban Regional Regression Equations for Peak Flow	Wayne Corley
3.	Regional Relations from a Stream Flow Measurement Database	Randy Williamson
4.	At Site Measurements of Bridge Piers and Abutment Scour	Wayne Corley

*(Continued on next page)*

## Hydrology Breakout Session (*continued*)

### All Topics Identified During Brainstorming:

Regional Relations from a Stream Flow Measurement Database  
At Site Measurements of Bridge Piers and Abutment Scour  
Debris Scour Critical  
Storm Water Monitoring at Few Select (2-4) Urbanized Maintenance Yards  
Comprehensive Scour Assessment Manual  
Determining the Capacity of Existing Culverts  
Calibrate the Rational Method c.Coefficient with SC Data  
Statewide Culvert Assessment  
Urban Regional Regression Equations for Peak Flow  
Coupling Traffic and Material Data at Graveling Stations  
Riparian Buffers to Reduce Scour and Stabilize Stream Banks  
Quality of Highway Run-off  
Chemical or Physical Means of Fines and Settlement  
Creating Software for Automating CN Valve Generation  
Alternatives for Rip-rap

**Project Development/Planning Breakout Session**

**Moderators:** Melissa Campbell, SCDOT  
 Luke Gibson, SCDOT

**Participants:**

Thad	Brunson	SCDOT
Rick	Callaham	SCDOT
Mo	Denny	SCDOT
Brent	Dillon	SCDOT
Chetna	Dixon	FHWA
Sarah	Gassman	University of SC
Ladd	Gibson	SCDOT
Steve	Gwinn	SCDOT
Matt	Lifsey	SCDOT
Ron	Patton	SCDOT
Mark	Pleasant	SCDOT
Keith	Plemmons	The Citadel
Robert	Pratt	SCDOT
Keith	Riddle	SCDOT
Philip	Sandel	SCDOT
Steve	Sanders	Clemson University
Randy	Williamson	SCDOT

**Priority Topics Identified:**

Topic	Champion
1. Public Education K-12	Randy Williamson
2. Value Engineering SCDOT Preconstruction Process	Robert Pratt
3. Project & Contract Manager Development and Certification Strategy	Matt Lifsey
4. Privatizing Personnel Recruiting	John Walsh/ Mary Gail Monts-Chamblee

*(Continued on next page)*

## **Project Development/Planning Breakout Session (*continued*)**

### **All Topics Identified During Brainstorming:**

Stream Restoration, Monitoring Over Time  
Watershed Regression Equations  
Biological Assessment of Culvert vs. Bridge  
Public Assessment of SCDOT Public Involvement  
Public Education (K-12)  
Addressing Critical Shortfalls  
Extending Geomatic Information  
Construction Specialization Present and Future  
Benchmark Study of PE Certification of SCDOT Deliverables  
Exploration of Additional Technician Certification Levels  
Value Engineering DOT Preconstruction Process  
Project and Contract Manager Development & Certification  
Objective Measurement of Physical and Economical Impacts  
Hot Lane Feasibility Study  
Jasper Port Research Opportunity  
Innovative User Fee Systems  
Native Plant Seeding Success in Coastal Zones  
Privatizing Personnel Recruiting  
Sustainability in the Project Planning Process  
Optimizing Maintenance Overlay Design Process  
Project Cost Estimating Best Practices  
Consultant Contracting Process  
Surveying Right-of-Way Acquisitions

**Business Operations Breakout Session**

**Moderator:** Temple Short, SCDOT

**Participants:**

Nadim	Aziz	Clemson University
Carl	Chase	SCDOT
Susan	Johnson	SCDOT
Greg	Peck	SCDOT
Arlene	Prince	SCDOT
Lamar	Tisdale	SC State University
Roy	Tolson	SCDOT

**Priority Topics Identified:**

Topic	Champion
1. SC Public Transportation Return on Investment Study	Doug Frate/ Roy Tolson
2. Determining Unit Price Adjustments for Steel, Aggregate, and Cement Construction Items	Greg Peck
3. Evaluation of the "Greenness" of SCDOT Projects	Carl Chase
4. Feasibility of Establishing SCDOT Grants Office/Department	Susan Johnson
5. Meeting Public Transit Needs as Related to Tourism and Retirement	Roy Tolson

*(Continued on next page)*

## **Business Operations Breakout Session (*continued*)**

### **All Topics Identified During Brainstorming:**

SC Public Transportation Return on Investment Study  
Determining Staffing and Resources to Create a Most Efficient DOT for SC  
Impact of Restructuring and Its Effect on the State Highway Fund  
Prototype Design of Engineering Complex  
Customer Service Survey (expanded scope)  
Feasibility of Establishing SCDOT Grants Office/Department  
Study to Determine if Underutilization Exists in Minority Contracting Opportunities  
Meeting Public Transit Needs as Related to Tourism and Retirement  
Maximizing Return on Investment of Research Performed for SCDOT  
Evaluation of the "Greenness" of SCDOT Projects  
Establishing a Data Depository for SCDOT  
Competitive Hiring for SCDOT Throughout the State and Southeast  
Determining Unit Price Adjustments for Steel, Aggregate, and Cement Construction Items  
Evaluation of Safety in Work Zones and on Job Sites  
Effectiveness of Outsourcing of SCDOT Functions/Services

**APPENDIX A: List of Meeting Participants**

Representing	Last Name	First Name
Carolinas AGC	McKee	Marty
The Citadel	Plemmons	Keith
Clemson University, Automotive Safety Research Institute	Pidgeon Walters	Philip Elli
Clemson University Civil Engineering Department	Aziz Bell Khan Nielson Putman Sanders Sarasua	Nadim Lansford Abdul Bryant Brad Steve Wayne
Federal Highway Administration	Blackwell Bowles Dixon Garling Johnson Law	Catherine Scott Chetna Jim Ken David
Hanson Aggregates	Barber	Neal
South Carolina Asphalt Pavement Association	Herndon	David
South Carolina State University	Tisdale Whitney Xie	Lamar Tom Yuanchang
South Carolina Department of Transportation	Amado Attaway Barker Berry Black Bland Bowers Brice Brooks Brunson Callaham Campbell Campbell Chase Clark Connolly Cook Cook	Bener Mark Julie Kyle Michael Stan Barry Curtis Phillip Thad Rick Dan Melissa Carl Robert Sean David Todd

Representing	Last Name	First Name
South Carolina Department of Transportation ( <i>continued</i> )	Corley	Wayne
	Cross	Henry
	Denny	Mo
	Dickinson	Robert
	Dillon	Brent
	Dodds	Tom
	Eleazer	Charles
	Fletcher	Milt
	Floyd	Lee
	Gantt	Steve
	Gibson	Ladd
	Gibson	Luke
	Gunter	Caleb
	Gwinn	Steve
	Hall	Christy
	Harmon	Nick
	Harrellson	Brett
	Hawkins	Chad
	Hundley	Judy
	Jones	Bryan
	Johnson	Susan
	Kwayisi	Mark
	Lacey	Chris
	Latham	Brad
	Lifsey	Matt
	Lockman	Mike
	McCarter	John
	McClure	Doug
	McKinney	Ben
	Mesa	Lucero
	Patton	Ron
	Peck	Greg
	Pleasant	Mark
	Pratt	Robert
Prince	Arlene	
Riddle	Keith	
Riddle	Joey	
Sandel	Philip	
Sanders	Mike	
Sawyer	Mike	
Selkinghaus	Cliff	
Shealy	Danny	
Sheppard	Tony	
Short	Temple	
Smoak	Charles	
Steagall	Todd	

Representing	Last Name	First Name
South Carolina Department of Transportation ( <i>continued</i> )	Swygert Tolson Townsend Vaughan Williamson Woodrum Zwanka	Terry Roy Dennis Ray Randy Jo Ann Merrill
Transportation Technology Transfer Service	Burati Gaines Priddy	James Shaun Sandra
University of South Carolina Civil & Environmental Engineering Department	Caicedo Cetin Gassman Goodall Rizos	Juan Mecit Sarah Jon Dimitris
US Geological Survey	Hurley	Noel

