

## Accountability Report Transmittal Form

Agency Name	<u>South Carolina Department of Transportation</u>
Date of Submission	<u>September 15, 2004</u>
Agency Director	<u>Elizabeth S. Mabry</u>
Agency Contact Person	<u>Carl Chase, Jr.</u>
Agency Contact's Telephone Number	<u>(803) 737-1960</u>



## TABLE OF CONTENTS

<b>Section I- Executive Summary</b>	<b>2</b>
<b>Section II- Business Overview</b>	<b>6</b>
<b>Section III- Elements of Malcolm Baldrige</b>	
<b>Category 1-Leadership</b>	<b>9</b>
<b>Category 2-Strategic Planning</b>	<b>14</b>
<b>Category 3-Customer Focus</b>	<b>16</b>
<b>Category 4- Measurement Analysis &amp; Knowledge Management</b>	<b>21</b>
<b>Category 5-Human Resource Focus</b>	<b>23</b>
<b>Category 6-Process Management</b>	<b>30</b>
<b>Category 7-Business Results</b>	<b>46</b>
<b>Appendix 1-Performance Measures</b>	<b>55</b>
<b>Appendix 2- Major Program Areas Chart</b>	<b>66</b>
<b>Appendix 3- Strategic Planning Chart</b>	<b>67</b>
<b>Glossary</b>	



**South Carolina Department of Transportation  
Annual Accountability Report  
Fiscal Year 2003-2004**

**Section I- EXECUTIVE SUMMARY**

---

**Description of the Department of Transportation**

The South Carolina Department of Transportation (SCDOT) is charged with the responsibility of systematic planning, construction, maintenance, and operation of the state highway system and providing mass transit services. SCDOT is responsible for managing the fourth largest state owned highway system in the nation.

**Mission and Values**

The mission of SCDOT is to provide a safe and efficient transportation system for the state of South Carolina. SCDOT builds and maintains roads and bridges, and administers mass transit services.

The values subscribed to by all members are described using the acronym RIGHT Team. As a member of the team, I do things the RIGHT way!

Respectful and supportive of others  
Integrity at all times  
Good at what I do, because I am competent and knowledgeable  
Honest and fair in all my actions  
Teamwork through communication

**Key Strategic Goals for Present and Future Years**

SCDOT is transitioning to an updated Strategic Plan, which will allow focus on what is referred to as the "Four Rocks." Below are the key strategic goals for present and future goals.

- Increase safety on South Carolina's transportation systems and within SCDOT
- Improve the quality, efficiency and appearance of the state highway system
- Improve and expand the multi-modal transportation system in South Carolina
- Enhance and implement integrated financial and project management systems
- Improve employee skills, their work environment, and provide opportunities
- Improve management of our property, equipment and technology
- Provide the highest level of customer service

The "Four Big Rocks" are to (1) Increase safety and maintenance on South Carolina's transportation system and within the agency; (2) Excel in customer service, internally and externally; (3) Use resources wisely and efficiently; and to (4) Improve employee development for all employees.



Safety is our top priority at SCDOT. Thanks to many state leaders, one of our greatest achievements this year was making median barrier funding a reality; it is a highly successful safety program. The South Carolina highway program was highlighted in the FHWA magazine *Public Roads*, an article titled, *Low Cost Solutions Yield Big Savings*. Among the solutions mentioned was the median barrier program. SCDOT has been recognized in an independent study as one of the top transportation departments in the nation for efficiency and productivity (Hartgen Report, UNC-Charlotte 2003). We have partnered with the private sector and local governments to build trust and improve quality of life for all citizens. SCDOT is working hard to maintain a good working relationship with the legislature to both inform and serve.

SCDOT began numerous major initiatives to improve highway safety in 2000. Vehicle miles traveled is up 7.9% from 1999, and the number of licensed drivers and registered vehicles has increased, making reductions even more significant. The number of non-fatal traffic injuries *declined* by 9.9% from 55,322 in 1999 to 51,267 in 2003, and the number of South Carolinians injured in a crash *dropped* from 1 in 69 to 1 in 78.

The state's mileage death rate (MDR, or the number of traffic deaths per 100 million vehicle miles) *dropped* 16.6%, from 2.4 in 1999 to an estimated 2.0 in 2003. In 1999, the state's MDR was 60% higher than the national average; now it is 33% higher. ***The 2.0 MDR is the lowest MDR ever achieved in South Carolina since records have been kept.*** The drop in the death rate is very significant; we will continue to monitor the data to see if this is a continuing trend.

## Opportunities and Barriers

Two of the most pressing challenges facing South Carolina are the condition of our state highways and the number of fatalities attributed to highway crashes. The state highway system contains nearly **42,000 miles of roads and 8,200 bridges**, which is the fourth largest state-maintained highway system in the country. SCDOT is responsible for **65% of public roads** in South Carolina, compared to a national average of 20%. South Carolina does a lot more maintenance with limited funding. On a per-mile basis, SCDOT's state source funding is the lowest in the nation. The biggest obstacle to overcome maintenance and safety issues is the amount of revenue available for improvements and enhancements.

While state source highway funding is the lowest it has ever been in terms of constant dollars, SCDOT continues to identify innovative and creative means of getting the job done.

## Lowering Death Rate Due to Highway Crashes

South Carolina has the third highest highway death rate in the nation. The death rate is 53% higher than the national average, and 35% and 53% higher than our neighboring states of North Carolina and Georgia, respectively. The top goal of SCDOT's Strategic Plan is to increase safety on South Carolina's transportation systems and within the agency. We plan to do this by reducing the number of highway crashes, injuries, and fatalities in South Carolina by 5% through the development and implementation of a variety of statewide safety initiatives. The major challenge facing SCDOT is funding for safety improvements on South Carolina's secondary road system, especially with 2 out of 3 highway deaths occurring on our secondary roads. Unfortunately, 24,500 miles of the secondary roads in South Carolina is



*not* eligible for federal highway funds. SCDOT receives among the lowest state funding per mile of all states.

## Funding

Currently, South Carolina has the lowest receipts per mile of roadway under state control in the country. Considering all sources of revenue, **South Carolina receipts are \$18,848 per mile** of state-maintained roads. The next lowest in the country is North Carolina at \$30,524; the **national average is \$95,492 per mile** of state-maintained roads.

SCDOT receives federal-aid highway funds for improvements on the federal highway system. Typically, SCDOT can only use these funds for construction activities. Unfortunately, SCDOT cannot use federal highway funds on 24,500 miles of roads under state control (about 60% of the state system). Normal maintenance activities performed by SCDOT are not generally eligible for federal funding. Thus, SCDOT uses about three-fourths of its state revenue for maintenance of all 41,350 miles of state roads and about one-fourth of the state's highway revenues are used to match federal funds to make improvements to the 17,000 miles that are eligible for federal participation. Growth in federal funding from the Transportation Equity Act of the 21<sup>st</sup> Century increased the amount of state funds needed to match federal dollars. The match requirement has increased by nearly \$60 million since 1997. State revenue has not kept pace, and SCDOT has been forced to divert funds from its maintenance budget to match all federal funds. As a result, SCDOT has no state-funded construction program and the agency has been forced to discontinue its secondary road-resurfacing program.

Because of this crisis, SCDOT is developing a long-range strategic funding plan to take to the Governor and the Legislature, **The total annual shortfall of funds now exceeds \$1.8 billion per year.** To meet this need, the funding proposal will be phased over a ten to fifteen year period. The very first phase will focus on the state's two top priorities of system preservation and safety; i.e., resurfacing, safety projects and highway maintenance. Good transportation policy requires we take care of the roads we already have in our system before building more roads.



## Major Achievements From the Past Year

Major achievements will be described in length in the “Business Results Section” of this report. The highlight of some of the major achievements of SCDOT during FY 2003-2004 include the following:

### Awards

- SCDOT received the National Roadway Safety Award from FHWA Operational Improvements to include installing cable barriers, truck lane restrictions, and using other practices to reduce interstate highway fatalities by nearly 1/3.
- SCDOT received the 2004 Keep America Beautiful/US Department of Transportation Award for the second consecutive year.
- Executive Director Mabry received the “Blue Granite” Award for extraordinary results for the people of South Carolina.
- The Department of Health and Environmental Control named SCDOT the Outstanding State Agency for its efforts in Waste Reduction and Recycling.
- The employee newspaper, *The Connector*, received the First Place Award in its division from the SC Press Association.
- David Cook of the SCDOT Maintenance Division won the George C. Asky Award by the American Academy for Certified Public Managers.
- The FHWA Division Administrator received the FHWA Safety Leadership Award for 2004.
- The Carolinas Associated General Contractors presented the 2003 Pinnacle Award for the James E. Clyburn Pedestrian Overpass.
- SCDOT Safety Director was awarded the AASHTOP President’s Award.
- SCDOT received an award from Midlands Technical College for its partnership for customer service training.

### Project completions and other achievements

- Completed US 501 in the amount of \$69M.
- I-95 widening in Darlington and Florence Counties was completed 3 months ahead of schedule. This project was selected as one of the top 10 highway construction projects in the nation by *Roads and Bridges* magazine.
- Bobby Jones Expressway in Aiken County was completed in the amount of \$41M.
- I-385 Interchange was completed in the amount of \$22M.
- Limehouse Bridge in Charleston County was completed in the amount of \$21M.
- SCDOT University was established.



## Section II- BUSINESS OVERVIEW

SCDOT is one of the largest state agencies and has a staff of approximately 5,000 men and women who work in all of the state's 46 counties and the central headquarters located in Columbia.

A 7-member transportation commission is the policy making body for SCDOT. The Governor appoints the Commission Chairman and the other 6 members are appointed by the legislative delegations from the 6 congressional districts across the state. The Commission appoints the Executive Director, who carries out the daily operation of the agency and the direction of the staff.

Four Deputy Directors, who each manage a major division of the agency, assist the Executive Director. The divisions are Engineering (led by the State Highway Engineer), Finance and Administration, Mass Transit, and Disadvantaged Business Enterprises and Special Projects. Also serving on the Executive Team are the Deputy State Highway Engineer, the Director of Human Resources and Strategic Planning, the State Administrator for Engineering Design and the State Administrator for Engineering Operations

### State Funding

The primary source of funding for SCDOT is the state motor fuel user fee. The state motor fuel user fee accounts for approximately 95% of the state's sources available to fund SCDOT. The motor fuel tax is primarily used to fund maintenance, program administration, mass transit, and to match federal-aid highway funds. The following chart shows the available state funds for FY 2003-2004 and the categories in which they were expended.

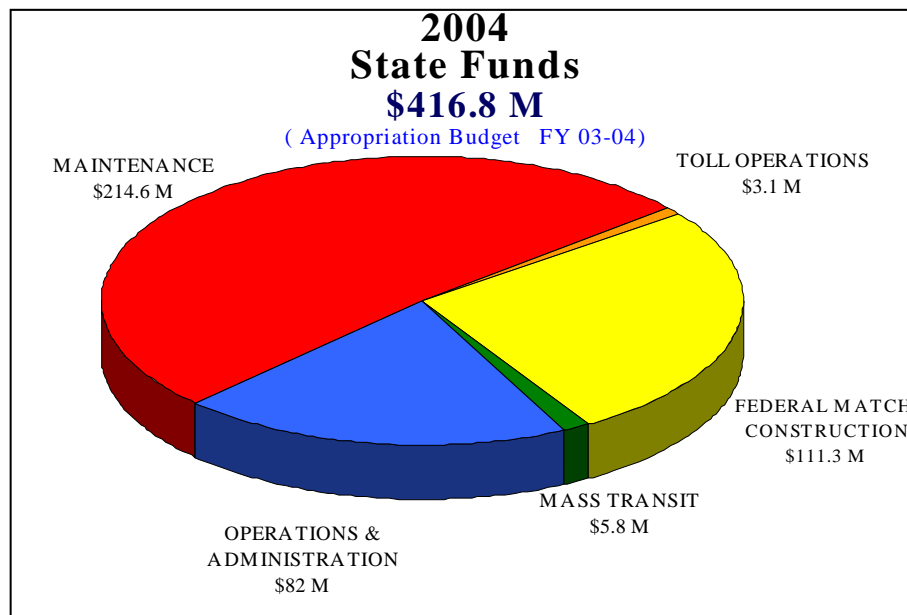


Figure ES-1

The Major Program Areas Chart is located on page 66 as Appendix 2.

## Accountability Report – FY 2003-2004 Funding Obligation Plan

SCDOT relies totally on federal-aid funds for capital improvements. However, federal funds may only be used on 41% of the roads for which SCDOT has the responsibility. As a result, many needed capital improvements remain unfunded. Maintenance on all roads for which SCDOT is responsible, must be funded from state funds. Current available state funding is insufficient to meet maintenance needs. The following table shows the FY 2003-2004 funding obligation plan for both federal-aid and state highway funds.

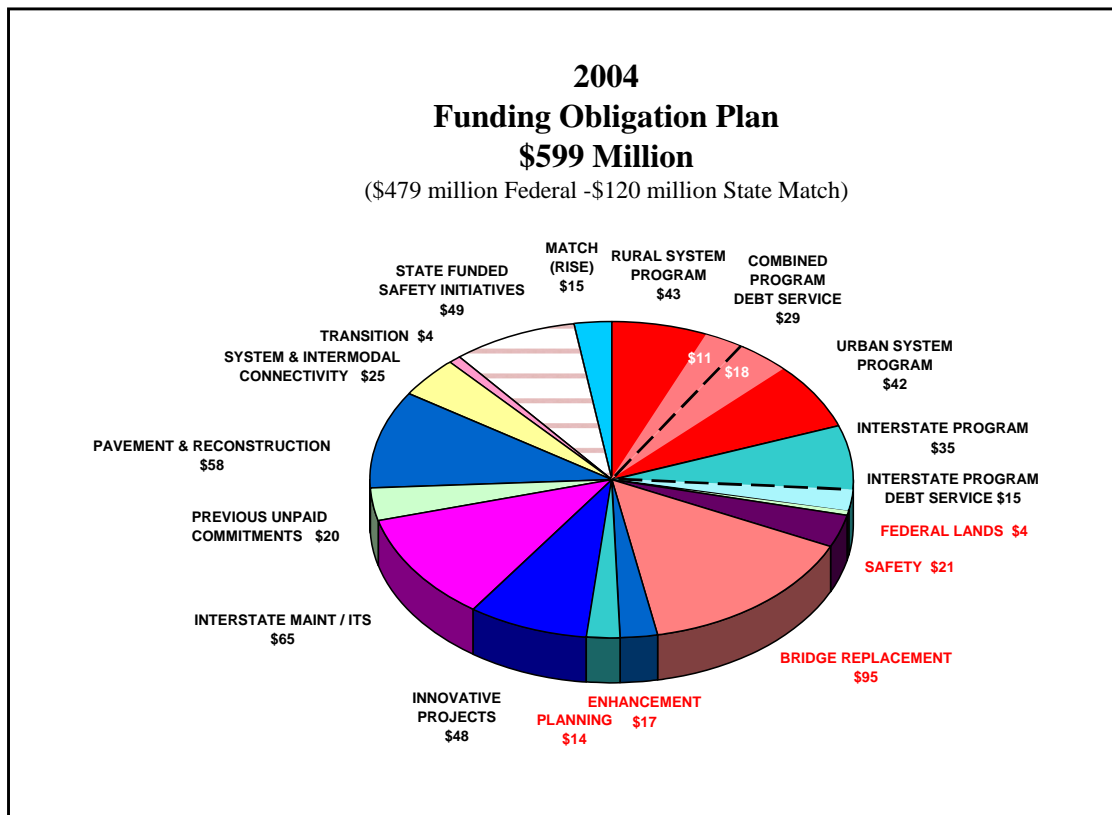


Figure ES-2

## Key Customers and Suppliers

SCDOT partners with a number of key private sector partners to maximize efficiency and effectiveness. SCDOT considers the Federal Highway Administration (FHWA) as a partner, but they can also be considered a customer. Other key customers of SCDOT are the motoring public traveling in South Carolina and those citizens who use public transportation. SCDOT partners with its customers by frequent interactions in public meetings, timely responses to correspondence, and personal interaction by the Commission and staff.



## **Key Suppliers**

When viewed from an economic perspective, SCDOT is among the largest businesses in South Carolina. There are approximately 17,000 suppliers in SCDOT's Automated Procurement System that provide goods and services to the agency. There are approximately 77 key suppliers.

## **Major Products and Services**

The major products and services are to build and maintain roads and bridges and to administer mass transit services to the citizens of South Carolina.

Others include:

- Statewide Intermodal Planning
- State Mapping
- Beautification of roadsides
- Operating and maintaining rest areas on the interstates
- Work Zone Safety Program
- Outdoor Advertising Permits
- Pedestrian and Bicycle Accommodations
- Providing staff for State Infrastructure Bank (SIB) and managing design and construction of SIB projects
- Research and Development of Construction Methods and Materials
- Incident Response Teams (Blue Trucks)
- Providing toll-free "hotline" to take citizens' calls during emergencies
- Assisting Governor's Safety Council and Emergency Management Division with emergency situations and planning

## **Section III – ELEMENTS OF MALCOLM BALDRIGE**

---

### **Malcolm Baldrige National Quality Award Criteria**

---

SCDOT is managed by incorporating the principles and seven elements of the Malcolm Baldrige Quality Award. This system has been institutionalized by the South Carolina General Assembly and the Budget and Control Board as the way South Carolina State Government is managed and operated. The seven elements are Leadership, Strategic Planning, Customer and Market Focus, Measurement Analysis and Knowledge Management, Human Resource Focus, Process Management, and Business Results.

### **CATEGORY 1: LEADERSHIP**

---

**1.1 How do senior leaders set, deploy, and communicate short and long-term direction; performance expectations; organizational values; organizational employment and learning, recognition, empowerment and innovation, and ethical behavior?**

#### **Short and Long-Term Direction**

The Executive Director meets regularly with her Executive Staff and Senior Staff to review and renew the goals and objectives in the agency's strategic plan. Both short and long-term directions are identified in the plan. The Executive Staff is comprised of the State Highway Engineer, the Deputy Director for Finance and Administration, the Deputy State Highway Engineer, the Deputy Director for Disadvantaged Business Enterprises and Special Projects, the Deputy Director of Mass Transit, the State Administrator for Engineering Design, the State Administrator for Engineering Operations, and the Director for Human Resources and Strategic Planning. The Senior Staff is comprised of the Deputy Directors, division heads within headquarters, and the 7 engineering administrators within the districts. Meetings with the Executive Staff are held weekly and meetings with the Senior Staff are held quarterly.

#### **Performance Expectations**

The Executive Director reviews "dashboard gauges" that contain essential information related to SCDOT's priorities and performance as outlined in the SCDOT Strategic Plan. Measures include (but not limited to):

- Safety (South Carolina Traffic Fatalities)
- Incident Response Program
- Construction Contracts Awarded
- Cable Rail Cost
- Cable Rail Hits
- Toll Operations

Each objective that supports a goal in SCDOT Strategic Plan has a performance measure. Employee performance is tied to SCDOT's vision, values, and goals as outlined in the Strategic Plan.



## Organizational Values

The organizational values are a part of the development and deployment of the strategic plan. This plan is a living and breathing strategic plan. We began the strategic planning process in 1997. When the plan was developed, a cross-section of employees, representing every facet of the agency, participated in the development of the values for SCDOT. SCDOT employees strive to meet SCDOT values by doing things the RIGHT way! SCDOT developed a special embossed lapel pin to remind employees of its values and SCDOT's vision of **"Public Trust: Earn it, Keep it!"**

## Organizational Employment & Learning

SCDOT takes seriously the responsibility to develop competent leaders within the agency. SCDOT has developed and pursued continuous developmental programs for those presently charged with leading and managing.

As part of succession planning, 2 leadership development programs have been developed. The Strategic Training for Transportation Agency Representatives (STTAR) is a yearlong course for approximately 16 agency employees who exhibit potential for promotion to senior leadership positions in the agency. The STTAR Program has just begun its sixth year. The magazine, *Engineering News Record*, selected the Executive Director as one of the nation's top 25 newsmakers in recognition of the STTAR Program; to date 111 employees have completed the program.

SCDOT has developed a companion 8-month course, the Strategic Training and Education Program for the 21<sup>st</sup> Century (STEP-21). It is available for selected employees who show outstanding potential for mid-level managerial positions. This program is highly selective and has a maximum of 21 agency employees. To date, 126 employees have completed the STEP-21 Program.

SCDOT has also developed a dynamic four-day course – "Leadership Development for Supervisors." All managers and supervisors are required to take this course. In addition to these programs, 24 employees completed the Associate Public Manager Program; one member of the Senior Staff completed the Executive Institute; 2 senior leaders completed the National Transportation Institute, and 5 managers were awarded the Certified Public Manager (CPM) credential during the year. In an effort to develop skilled engineers for the future, SCDOT has an Engineering Development Program and an Engineering Skills enhancement program.

## Recognition, Empowerment and Innovation

SCDOT employees are rewarded for their creativity and innovative ideas. SCDOT rewards innovation with 3 types of recognition: (1) An On-the-DOT certificate is awarded an on-the-spot recognition of a noteworthy accomplishment or improvement in a work process or working condition. Any employee can initiate this award. While the certificate itself is an award, many other items are available such as hats, shirts, etc., to encourage and promote employee pride. (2) An On-the-DOT EXTRA is available for performance of a duty that is especially commendable. On-the-DOT EXTRA recognition is a cash award ranging from \$100 to \$250 and can be initiated by a division head; and (3) *Idea Express!* is where



employees submit ideas for improving operations that result in the savings of time and/or money. Ideas accepted may result in cash awards depending on the savings generated.

Moreover, outstanding SCDOT employees are recognized annually as Employees of the Year. Eight employees representing the headquarters and the seven engineering districts are recognized as Employees of the Year. These employees are awarded various letters of commendation, a trophy, a certificate of achievement from SCDOT's Commission Chairman, and a letter of congratulations from the Governor. Additionally, 53 employees are recognized as Unit Employees of the Year and receive a trophy and letters of commendation.

In May of 2004, an Employee Recognition Celebration was conducted in headquarters and each of the districts, to celebrate the contributions of SCDOT employees. At the headquarters facility, the senior staff cooked a light meal for the employees; a Chili-Cook Off Competition was part of the celebration.

SCDOT values its employees who are serving in the Armed Forces. Upon their return to regular employment, they are honored at a special ceremony attended by members of the SCDOT Commission and the Adjutant General and other senior military leaders. Two ceremonies have been held to honor their service. The Deputy Adjutant General, Brigadier General Harry Burchstead, commended SCDOT for the caring attitude it shows to its military employees. Below is a photograph taken at one of the ceremonies.



SCDOT Employees honored for Military Service

Photo by Rob Thompson

In an effort to improve safety in the operation of heavy equipment, SCDOT sponsored an Equipment Operator's Rodeo, based on successful programs in Arkansas and Mississippi. Employees showcased their ability to safely operate a variety of maintenance equipment to include mowing tractors, single and tandem axle dump trucks, motor graders, and truck tractors with lowboy trailers. Winners of the competition will match their abilities with maintenance employees from Arkansas and Mississippi in the fall of 2004.

Richard Stroble of Charleston County Maintenance won First Place in the lowboy competition and Matt Sanford of Jasper Maintenance won First Place in the motor grader event.

## **Ethical Behavior**

*“Public Trust: Earn it, Keep it”* is the vision of SCDOT. All of its employees are advised of the state’s ethics law. SCDOT has established policies and procedures to prevent unethical behavior. SCDOT has begun a briefing on ethics at Senior Staff meetings and intends to have annual updates on this topic.

### **1.2 How do senior leaders establish and promote focus on the customer?**

SCDOT’s vision is “Public trust: Earn it, Keep it!” Senior leaders of SCDOT focus on the customer by including public input in all SCDOT services. SCDOT has established formal partnerships with all its major partners and stakeholders. The public has many opportunities to actively participate in the planning and developing of highway projects. In addition, SCDOT leadership tracks correspondence and inquiries by using a Correspondence Tracking System. A key business requirement is *Quality Customer Service*. The actions in this business requirement will be discussed in depth in “Category 3-Customer Focus” of this report. SCDOT has also incorporated customer service as a strategic objective. Customer service is a key to its operations and is woven into its business plans. The Department has established a pilot customer outreach program in Engineering Districts 5 and 6.

### **1.3 How do senior leaders maintain fiscal, legal, and regulatory accountability?**

State law governs SCDOT’s operations; Title 23 of the United States Code of Laws governs the use of federal funds. SCDOT has incorporated in its culture a strong value system emphasizing honesty and integrity in all of its actions. There are periodic budget reviews and a strong internal and external audit process. During the past year, the Office of Contract Audits placed focus on conducting audits and field reviews to check for any purchase irregularities that may not comply with the State Procurement Code. SCDOT contracts with a commercial audit firm, approved by the South Carolina State Budget and Control Board, to conduct an annual audit of its financial records. During the past fiscal year, there has been a renewed effort to account for all non-inventory property and to dispose of surplus property.

### **1.4 What key performance measures are regularly reviewed by the Department’s Senior Leaders?**

There are key performance measures assigned to each goal. The Senior Leadership reviews them on a quarterly basis. The performance measures are part of the Strategic Plan and support each of the seven goals. The measures and results are contained in “Category 7-Results” of this report.

### **1.5 How do Senior Leaders use organizational performance review findings and employee feedback to improve their leadership effectiveness and the effectiveness of management throughout the organization?**



In late 2003, SCDOT developed an employee opinion survey that was administered to all employees. The purpose of the survey was to gauge agency strengths and to identify opportunities for improvements. There was a phenomenal 90% response rate from approximately 5000 employees. . After the results were analyzed, meetings were held to communicate the results and to allow employees the opportunity to ask questions and make comments.

**1.6 How does the organization address the current and potential impact of the public on its products, programs, services, facilities and operations, including associated risks?**

SCDOT uses a multitude of forums to determine and address highway and public transit issues that affect the public in South Carolina. The State Transportation Commission holds a monthly meeting in which stakeholders and the public are invited. While the General Assembly is in session, the Commission meets at SCDOT headquarters to allow the legislators the opportunity to attend and participate. The Commission encourages legislators and the general public to share their concerns. After the General Assembly concludes the Legislative Session, the Commission holds its monthly meetings at other locations around the state. Annually, SCDOT updates the State Transportation Improvement Plan, with input from the Councils of Governments (COG) and the Metropolitan Planning Organizations (MPO).

Public involvement is a key in our planning and developing of projects. Major projects usually begin with a local partnership established. Public involvement is encouraged at all levels of a project, through public hearings, newspaper editorials or announcements.

**1.7 How does Senior Leadership set and communicate key organizational priorities for improvement?**

The Senior Leadership holds frequent meetings throughout the year and establishes objectives that support the goals in the SCDOT Strategic Plan. Business Plans are established by each Division, which names priorities and objectives. Progress is monitored by reports linked to key measures. . These reports are reviewed by the Senior Staff. These objectives and their measurements are cascaded to all organizational groups to ensure all employees of the agency understand the direction necessary to achieve the goals.

SCDOT has also implemented timely video messages from the Executive Director to all employees. These messages will become live broadcasts in the next few months. Video conferencing has also been installed in the central and district offices.



**1.8 How does Senior Leadership and the agency actively support and strengthen the community? Include how the Department identifies and determines areas of emphasis.**

SCDOT is actively involved in strengthening the community in which the agency's people work and live. SCDOT's values help us in identifying the causes we support. SCDOT is totally committed to being a good corporate citizen. Throughout the year, employees participate in several volunteer programs such as "Families Helping Families," SCDOT C.A.R.E.'s, and Habitat for Humanity. We facilitate the Bicycle and Pedestrian Advisory Committee and the Roadside Enhancement Beautification Committee in South Carolina. SCDOT is a large family of families deployed throughout the state. There is SCDOT presence in all 46 counties.



## CATEGORY 2: STRATEGIC PLANNING

---

### **2.1 What is your Strategic Planning Process, including participants, and how does it account for Customer needs and expectations, financial, societal, and other risks, human resource capabilities and needs, operational capabilities and needs and supplier/contractor capabilities and needs?**

As we look to the future at SCDOT, there are many challenges and opportunities ahead. As one of South Carolina's largest state agencies, the SCDOT Commissioners and the Executive Director recognize the importance of planning and have accepted the responsibility to support and drive the plan. The executive leadership is charged with the development and deployment of the Strategic Plan. This plan is the foundational document that guides daily and long-term operations. The Strategic Planning Chart is located on page 67 as Appendix 3.

The *SCDOT Strategic Plan is a living document*, updated annually. Each year, meetings are held across the state in an effort to deploy the plan. In 2003, SCDOT initiated an internal survey to receive feedback from employees on needs and expectations. In the spirit of continual improvement of processes and practices within SCDOT, a consultant, renown for working with transportation departments, was retained to develop, distribute and analyze an Employee Opinion Survey. The survey provided data to facilitate understanding of employee concerns and to pinpoint areas of excellence and areas for improvement.

The results of the survey were dispersed to every employee. In reaction to the survey results, which were used as a basis for developing strategies, SCDOT is transitioning from a plan that had 7 goals to one that has 4 areas of focus. The Executive Director established these 4 focus areas: (1) Safety and Maintenance; (2) Resources; (3) Employee Development; and (4) Customer Service.

The plan involves all of SCDOT's employees and partners. Key partners include the Federal Highway Administration (FHWA) and the Construction Resource Managers (CRM). (The CRM is a firm or group of firms that has experience and expertise in highway/bridge design and construction. Presently, the CRM is assisting SCDOT with the construction of over 200 projects across the state.)

The Strategic Plan is a global/statewide plan, ranging from 3-5 years; the Business Plan is a local plan to enhance the strategic plan and is usually accomplished in 1 year. As the plan has matured through the years, employees have been asked to take an active part in the business planning process. These business plans are the foundation of the SCDOT's budget.

The goals of the Strategic Plan are accomplished through the business plans. The business plans are accountable with a performance measure and a completion date. The business plans are maintained by each division, with updates provided to the division Deputy Director, as well as to the Strategic Planning Committee. The FHWA is a partner of choice and an active participant in the strategic planning process. A monthly "dashboard report" is provided to the SCDOT Commission, Executive Director, senior staff members, and extended staff. The dashboard report is compiled from various information and typically changes from month-to-month, based on items of interest or concern. Items that appear on the monthly dashboard report reflect the strategic planning goals.

Beginning in April 2003, the Agency Operations, Organization, and Policy Course was deployed statewide.





To ensure consistency, a senior manager was tasked to make the presentation live to each and every employee. This course shows the employees where they fit in the overall operations of the agency and their part in the strategic planning process. The course continues to be deployed and is presented to all new employees early in their career.

### **Statewide Multi-Modal Long-Range Transportation Plan**

SCDOT receives input from the Councils of Government (COG) and the Metropolitan Planning Organizations (MPO) in the development of the Statewide Multi-Modal Long-Range Transportation Plan. Because of the rapid population growth in South Carolina, we are looking to develop a system that will satisfy the needs of both residents and visitors. Each COG has worked with the Regional Transportation Authority (RTA), ports, MPO, and other interests to develop its regional plan. The SCDOT Office of Planning is responsible for producing the long-range plan for the state of South Carolina. Staff from the Mass Transit, Engineering, Rail, Multi-Modal, and the FHWA offices have worked with regional planning staff to develop the recommended "regional plan."

### **State Transportation Improvement Program**

The State Transportation Improvement Program (STIP) is a comprehensive document report, developed each year. The STIP lists various types of projects for work planned in the next five years. It reflects the collaborative efforts of the MPO, COG, and Regional Transportation Authorities (RTA). The development of the STIP involves multiple working partners.

## **2.2 How do you develop and track action plans that address your key strategic objectives?**

All strategic objectives are owned by a member of the senior staff (and their staff). There is a Quarterly Review by the Executive Team.

## **2.3 How do you communicate and deploy your strategic objectives, action plans, and performance measures?**

An annual retreat is conducted for the primary purpose of updating the Strategic Plan, including its supporting objectives and performance measures. This information is cascaded to all levels of the agency. Appropriate business plans to support the Strategic Plan are developed by each major organizational unit. Quarterly updates regarding progress on performance measures are distributed to all managers. Additionally, the Executive Director and senior staff members visit the county offices on a regular basis to give updates on SCDOT activities and strategic plan progress. The employees ask questions and provide feedback regarding the Strategic Plan. The Executive Directors monthly video message to all employees is also used to communicate the plan.

Efforts to communicate and deploy the Strategic Plan at SCDOT are across the board. SCDOT has committed to increase SAFETY and MAINTENANCE on South Carolina's transportation system and within the agency; to excel in CUSTOMER SERVICE, internally and externally; to use RESOURCES



wisely and efficiently; and to improve EMPLOYEE DEVELOPMENT for all employees.



## CATEGORY 3: CUSTOMER FOCUS

---

### 3.1 Identify key customers and stakeholders.

The key customers of SCDOT are the citizens of South Carolina, as well as those people who visit the state for business or pleasure and use the transportation system. Our customers' concerns are addressed through a variety of methods. Those methods include representation by the MPO and COG. The County Transportation Committees (CTC) and other constituency organizations also address their concerns and needs. The state is divided into **10** MPOs and **10** COGs. Rural transportation needs are addressed through **18** public transit providers. Key stakeholders in the delivery of services include the FHWA and FTA.

### 3.2 How do you determine who your key customers are and what their key requirements are?

Our key customers are determined by South Carolina State Law, Section 57-3-10. SCDOT determines its requirements by interacting with elected representatives at the state, county, and municipal levels. SCDOT also holds a multitude of public forums and performs specific surveys of different stakeholders. In a recent customer survey conducted by the Institute for Public Service and Policy Research of the University of South Carolina, SCDOT identified some concerns where 826 citizens were interviewed. Over 2,000 telephone interviews and 5 focus group sessions were conducted statewide to determine if our customers understand the role of SCDOT. Many people mistakenly view the agency's role as enforcing the speed regulations and issuing drivers licenses. In addition, many of those surveyed did not understand how SCDOT is funded. This survey, coupled with SCDOT's focus on customer service training, responsiveness to work requests, user friendly web site, Incident Response Teams, and public meetings, allows the agency to learn and respond to the needs of its customer.

### Customer Service Training

In January 2000, SCDOT initiated a training program to address the needs of its customers. In the program, conducted by Midlands Technical College, SCDOT employees were taught how to serve the public in a courteous and responsive manner. Since the inception of the program, 4,914 employees have attended the full-day training. SCDOT received the Outstanding Continuing Education Cooperative Program Award from the South Carolina Association for Higher Continuing Education.

### Internet Site

SCDOT personnel continue to expand and update the information available on the agency's primary Internet site, [www.scdot.org](http://www.scdot.org). The average daily number of visitors has risen to 4,200. The new Article Manager application provides easy access to SCDOT's press releases. Visitors may view articles by the latest headlines or by categories, such as construction and maintenance, weather-related information, public hearings, or general information. All projects under construction can be viewed on the website, including schedules, budgets, and project information. Up to date data on road conditions and closures are easily accessible for viewing.



SCDOT redesigned its Internet site to comply [with federal accessibility requirements \(Section 508\)](#), SCDOT employees are now [serving on state committees to develop a proposed policy for all state agencies to become compliant with these standards](#).

[The redesign of www.scdot.org was geared towards making it more user friendly to all visitors. SCDOT is constantly looking for ways to improve upon its site, thereby better serving the public. In July of 2004, we published an online survey providing a means by which visitors could comment on the site. This information, combined with new and improved network infrastructure and web technologies, will be used to plan for future pages, applications, and site redesigns.](#)

### **3.3 How do you keep your listening and learning methods current with changing customer/business needs?**

SCDOT is actively involved in a myriad of professional associations and is active in the university community. Some of the organizations include the American Association of State Highway and Transportation Officials, the Transportation Research Board, the Transportation Association of South Carolina, and the American Society for Civil Engineers. SCDOT is involved in the local community and its employees are members of community and support organizations. SCDOT has made presentations to the American Association of General Contractors, the South Carolina Business Alliance, and the South Carolina Transportation Policy and Research Council. Regular meetings are held with the assistance of the Associated General Contractors, the Consulting Engineers of South Carolina, the Asphalt Association, the Concrete Association, and the Trucking Association to discuss issues regarding their respective industries.

Public (customer) input is received during the planning and developing stages of highway projects. Many design changes occur because of public input. SCDOT held 2 training sessions during the past year to reinforce listening to customers and developing highway projects within its context.

### **3.4 How do you use information from customers/stakeholders to improve services or programs?**

The Maintenance Office tracks the time it takes to process a work request and, based on the data, SCDOT is able to evaluate resourcing and process management. SCDOT's Incident Response Teams ("Blue Truck") provide assistance to thousands of motorists annually. All motorists receiving assistance are surveyed and suggestions are incorporated to improve services. The district engineering staff reviews the data in order to make improvements, as necessary, to the program. SCDOT tracks all correspondence received to insure a timely response and resolution to issues raised. The Oversize/Overweight Vehicle Permit Office surveyed its primary customers regarding the permitting process. Based on the information gained by the survey, SCDOT's Oversize/Overweight Vehicle Permit Office revamped and automated their processing for permits. The Rights of Way Office distributes surveys to landowners when property is acquired as to their experience with SCDOT.

### 3.5 How do you measure customer/stakeholder satisfaction?

SCDOT measures customer and stakeholder satisfaction from the surveys obtained from selected programs. SCDOT also receives numerous comments from the public via its web site comment line. SCDOT surveys customers of the Cross Island Connector Toll Facility, Incident Response Teams, and property owners during right-of-way acquisitions.

**USC Survey:** The Division of Research of the Moore School of Business at the University of South Carolina recently released the findings from the “Customer Input Concerning Highway Maintenance” public opinion survey. This survey gauged the public’s opinion as to which maintenance activities were most important. Based on the findings, the highway surface, bridges, and driveways were the most important maintenance activities. Focusing our maintenance funds and efforts in these areas should result in a higher level of customer satisfaction. The public rating of SCDOT on current maintenance activities was a “B” overall.

**Establishment of Benchmarks:** Benchmarks have been established for completing work identified through customer work requests. The measure is to complete 95% of routine work orders within 60 days. Requests of a critical nature are normally handled within 24 hours of their receipt.

**Pilot Customer Outreach Program:** A pilot customer outreach program has been established in a 2-district area. A Customer Service Representative has been appointed who purposely has limited experience with SCDOT and brings an independent perspective to review current customer service activities.

**Tracking System for Customer Inquiries/Complaints:** There has been a system established at the district level to track customer requests with approximately 70,000 requests being tracked annually. There is also a correspondence tracking system in place.

### 3.6 How do you build positive relationships with customers and stakeholders?

#### Public Meetings

SCDOT invites the public to information meetings on all major highway projects. The designated Program Manager is present to answer all questions regarding the project. Prior to construction, the local businesses and residents are notified of the project by personal visits and distribution of flyers. For example, there is a project in Lexington County at the I-26/US 378 Interchange where the work involves relocating the frontage roads, reconfiguring the ramps, and replacing the existing bridge. Prior to construction, the public was notified by a series of presentations at churches, homeowners’ associations and civic club meetings, as well as newspaper articles and advertisements. A drive-through visualization and still renderings were generated to assist with the presentations. The contractor assists with the meetings.

During fiscal year 2003-2004, 126 public meetings were held and 70 presentations were made to various governmental and constituency organizations regarding road and highway improvements, which provided prompt responses to inquiries. SCDOT has begun to implement a context sensitive approach for project development. A context sensitive approach involves working with community stakeholders to preserve and enhance the human and natural environment. A discussion of this approach, including basic



principles, has been incorporated into the 2003 Highway Design Manual.

### **Conferences and Workshops**

SCDOT and its partner of choice develop conferences and workshops related to issues affecting the safety of the users of the state's transportation system. The "2003 Bicycle and Pedestrian Conference" was held this fiscal year to raise awareness of many issues regarding bicycle and pedestrian accommodations in South Carolina. The theme for this conference was, "Working with Our Partners, Moving Forward, Step by Step." The conference brought together participants from the private sector, highway engineers, planners, local, state, and federal leaders. The conference also celebrated initial successes in communities that had improved their bicycle and pedestrian accommodations. The next Bicycle and Pedestrian Conference is scheduled for October 2004. To keep its maintenance forces updated, the Department conducts a maintenance conference and a maintenance foreman's conference

### **Intelligent Transportation Systems**

SCDOT has developed and deployed Intelligent Transportation Systems (ITS) across the state. These systems include the latest transportation technologies, such as closed circuit television cameras, highway advisory radios, changeable message signs, local Traffic Control Centers (TCC), and a central Traffic Management Center (TMC).

There are now over 150 cameras in operation. Public television stations, WIS in Columbia, WSPA in Spartanburg, WYYF in Greenville, and WCSC in Charleston, use live video from the traffic cameras in their locale. These stations are also linked to SCDOT's web site. SCDOT also provides live feed to the South Carolina Emergency Management Division and the South Carolina Department of Public Safety (SCDPS). In addition, SCDOT has agreements to share traffic video with Air One, Citadel Broadcasting, Media General, and Traffic Patrol Broadcasting of Charleston.

In addition to the cameras, SCDOT utilizes 142 side-fire microwave speed detectors, 121 automatic traffic recorders, nearly 120 changeable message signs and 12 highway advisory radios. These devices are used to aid daily traffic operations, as well as coastal evacuations. In addition, many of these tools are utilized in SCDOT's support role to the State Law Enforcement Division for AMBER (America's Missing: Broadcast Emergency Response) Alerts. In 2004, SCDOT participated in 3 AMBER Alerts.

### **SCDOT Incident Response Program**

One of the more visible customer-focused programs of SCDOT has been the Incident Response Program, which operates in 9 heavily congested areas of the state to provide assistance to motorists. This program uses specially equipped blue trucks with SCDOT's logo. Incident Response vehicles are equipped with fuel, water, and tools to enable quick repairs for disabled motor vehicles.

The Incident Responders have contact with the Highway Patrol and other emergency responders across the state. SCDOT continues to build on the program as part of ITS. Figure 7.1a depicts the number of motorists the SCDOT Incident Response Program has assisted in the past 3 fiscal years. Teams are located in Columbia, Charleston, Beaufort, Upstate Interstate 85, Rock Hill, Myrtle Beach, and Florence and Cherokee. These teams assisted 79,686 motorists in FY 2003-2004. All motorists receiving assistance are



given an Incident Response Survey and asked to complete it. The survey form is a Business Reply Mailing addressed to SCDOT.

### **Reduction of the Condemnation Rate**

SCDOT made significant strides in improving public satisfaction in the appraisal and right-of-way acquisition process, which is an indication of customer satisfaction. The condemnation rate for FY 2003-2004 is 11%. SCDOT continually strives to reduce our condemnation rate by reaching amiable settlements for right-of-way acquisitions. SCDOT has established a goal of reducing this rate by 1% per year, until it reaches a level where it is no longer cost effective to try to reduce. We conducted a Landowner Opinion Survey and a Displaced Property Owners Survey with a rate of return of 30%. The condemnation rate on federal-aid projects declined to 9%. A pilot project was initiated where property owners select an appraiser from an approved SCDOT list. In another pilot project the property owner hires the appraiser and SCDOT pays for the appraisal. (See Figure 7.1b.)

### **Cable Median Barriers**

SCDOT continues to install cable median barriers with a total of 421 miles of barrier installed since the inception of the program. There have been 5026 hits occurring on installed cable rails since 2001, with 2063 hits during FY 2003-2004. SCDOT won the National Roadway Safety Award for installing cable barriers and implementing other practices to reduce interstate fatalities. FHWA Administrator Mary Peters recognized Executive Director Mabry, SCDOT, and the District Administrator of FHWA, Bob Lee, for the effort to reduce highway crashes.



## **CATEGORY 4: MEASUREMENT ANALYSIS AND KNOWLEDGE MANAGEMENT**

---

### **4.1 How do you decide which operations, processes and systems to measure?**

During SCDOT's strategic planning development process, the agency developed a set of key measures as indicators of how well it is achieving the agreed upon objectives. Each objective has a measure and progress is reported quarterly to the Strategic Planning Coordinator, the Executive Director, and the Deputy Directors.

SCDOT provides data related to the 12 performance measures of highway expenditure and system performance to the FHWA. This data is used for a variety of reports, such as the Annual Comparative Performance of State Highway Systems published by the University of North Carolina, Charlotte, Center for Interdisciplinary Studies. SCDOT also reviewed data developed by the FTA for comparison of mass transit operations. SCDOT is a member of several professional organizations, including the American Association of State Highway and Transportation Officials (AASHTO) and the Transportation Research Board (TRB), who also provide comparative data. Additionally, every goal in the Strategic Plan and the supporting objectives contain a measure.

### **4.2. What are our key measures?**

The key measures are located in Category 7 of this report and in Appendix 1.

### **4.3 How do you ensure data quality, reliability, completeness, and availability for decision making?**

SCDOT has developed various information systems and has adopted the use of AASHTO developed Shareware. SCDOT established a Quality Management Team to ensure that construction and environmental standards were being followed. Seven key areas are inspected, including Bridges, Structures, and Foundations, Erosion Control, Estimates/Project Records, Field Construction Items, Sampling and Testing, and Traffic Control/Safety. The team makes unannounced visits to the construction sites throughout South Carolina; there were 89 unannounced visits this year.

### **4. 4 How do you use data/information analysis to provide effective support for decision-making?**

The Executive Director has a monthly set of measures used as "dashboard indicators" that help her determine the pulse of the agency and how it is performing its mission. The "dashboard indicators" include the number of traffic fatalities, number of Incident Response Program assists, number of -Construction Contracts awarded, Cable Rail Costs and hits, and Toll Operations. Quarterly, the Senior Staff and process owners review measures related to their divisions. SCDOT uses data from the South Carolina Department of Public Safety to analyze traffic accidents.

### **4.5 How do you select comparative data and information?**





SCDOT uses comparative data from other transportation agencies across the nation, as well as information provided by professional organizations such as AASHTO and TRB. Providing the public, business partners, and employees with access to timely information is an essential part of providing first-class service. SCDOT continues to implement information technology solutions “just in time” to match the demands of a technology driven workforce. SCDOT has a number of automated systems that allow it to select data for timely decision-making. SCDOT compares processes used by other transportation departments to develop a “best practice” model. SCDOT has also partnered with the Florida Department of Transportation and the FHWA to develop the framework for a 10-year cash flow forecasting model, and the Texas Department of Transportation in their use of a Transportation Equipment Replacement Model.

#### **4.6 How do you manage organizational knowledge to accomplish the collection and transfer and maintenance of accumulated employee knowledge, and identification and sharing of best practices?**

SCDOT has developed a variety of mentoring and leadership development programs to ensure the transfer of employee knowledge. SCDOT University has been established to formalize the process of transferring knowledge. A workforce development project continues to ensure that people are prepared to accomplish their duties and are compensated based on their assigned tasks. SCDOT is a member organization of many professional groups that allow SCDOT to identify “best practices.”

## **CATEGORY 5: HUMAN RESOURCE FOCUS**

---

One of the four key strategic goals of SCDOT is employee development. The Human Resources Division's initiatives support that goal and the agency's mission by focusing on programs, measurements, processes and systems that recruit, retain, and train employees so they have the necessary skills and competencies to meet the challenges of the future.

### **5.1 How do you and your managers/supervisors encourage and motivate employees (formally and/or informally) to develop and utilize their full potential?**

SCDOT management recognizes the need to recruit, develop, and maintain a labor force of talented individuals that are capable of carrying out organizational commitments in an ever-changing work environment. SCDOT is also committed to developing and maintaining programs that foster individual growth for employees, target internal staff for advancement, and aid in creating a diverse workforce.

SCDOT utilizes and emphasizes the tuition assistance program that allows employees to be reimbursed for classes that are helpful to his/her current job performance or to prepare the employee for other positions within the agency. During the 2003-2004 fiscal year, there were 43 SCDOT employees that received tuition assistance. Also, there have been a total of 16 SCDOT employees that have received degrees with the help of the Department's Tuition Assistance program since its inception in 1994. (See Figure 7.4a – Tuition Assistance Budget.)

SCDOT recognizes employees who have made significant contributions through innovative Employee-of-the-Year, On-the-Dot and On-the-Dot Extra recognition programs. These reward and recognition programs encourage peer-to-peer recognition and foster a work environment that rewards employees for exceptional customer service, productivity and other noteworthy contributions. (See Figure 7.4b – Employee Recognition.) In addition, SCDOT places an emphasis on "State Employee Recognition Day" where senior staff uses this opportunity to thank SCDOT employees for their hard work, dedication and commitment. Headquarters and the district offices are encouraged to find creative ways to recognize and appreciate their employees on this special day.

SCDOT is involved in a workforce plan that will enable the agency to determine the workforce needs for tomorrow's success, compete in today's market, bridge knowledge gaps, and align those needs to meet organizational goals, commitments and priorities. To that end, a contract was awarded to Clemson University to assist in the development of a workforce plan for the Trades Specialist classification series. In addition, efforts are underway to update SCDOT's current classification and compensation system in order to develop one that will better align with the agency's occupational profile. This will yield a flexible, responsive, and adaptable structure that can adjust current classifications, career paths, competencies, training and experience to meet new and changing requirements. A committee, comprised of representation from various areas throughout SCDOT, has been established to address this reform. The Engineering/Geodetic Technician series is currently under review.

The Classification and Compensation Reform Committee is working in parallel with Clemson University's



study of the Trades Specialist classifications. Within two years, 70% of the employees of SCDOT will have career paths with the defined competencies and specified training necessary for advancement. In addition, planning has begun to create similar career paths for the remainder of the agency, which will be incorporated into the SCDOT University.

During FY 2003-2004, Employee Benefits conducted meetings in each district and in the headquarters office to inform employees of their benefit choices. Employees have been involved in pre-retirement consultation, benefits training, new employee orientation, and survivor consultation.

SCDOT's "Women's Forum" was created as a result of a State Task Force on Women in the Workforce. A committee was formed to develop a series of women's forums to address the needs of its female workforce. As a result, regional forums were conducted in 2002, which hosted 645 attendees; another series of forums are scheduled for Fall 2004. These are held every two years.

SCDOT looks at turnover in a variety of ways in order to develop strategies to retain its valuable employees. (See Figure 7.4c – Turnover.) Turnover is analyzed by termination reason code (See Figure 7.4d Turnover by Reasons), EPMS evaluation, job classification, geographic location and by probationary status. Analysis of the past 3 years' data shows that the primary reasons for termination of employment are resignation, substandard performance, retirement, and acceptance of another job in the same city. Turnover by job classification shows that most of the agency's turnover exists in the job classification of Trades Specialist II.

Over the past 3 years, approximately 75% of SCDOT's turnover has been in pay bands 1 and 2. A special pay increase, approved by the State Office of Human Resources, was given effective March 2, 2003, to enhance SCDOT's efforts to recruit better candidates, assist in the retention of our current employees, and help reduce our extremely high turnover in these bands. A total of 1507 employees in bands 1 and 2 were eligible to receive a special pay increase of \$500. Another 102 employees received a partial increase due to the maximum of the pay bands. In addition, level minimums for these bands were also increased by \$500.

## **5.2 How do you identify and address key developmental and training needs, including job skills training, performance excellence training, diversity training, management/leadership development, new employee orientation and safety training?**

The leadership of SCDOT is committed to furnishing employees with the resources they need to do their jobs and to accomplish SCDOT's mission. Personal and professional growth for its employees helps build important skills needed by SCDOT, as well as directly supporting employees as they pursue opportunities for advancement and promotion. In an effort to build a highly skilled workforce, SCDOT employees were given the opportunity to plan the training and development experiences that are important to them and to the agency. A tremendous emphasis is being placed on employee development and an effort is being made to link training initiatives to the strategic plan in support of the agency's mission.

Training needs assessments are completed annually at the same time as the annual EPMS. This information will be captured to create future training plans based on the identified needs. Functional/technical areas will be added as the SCDOT University grows to provide a more comprehensive approach to all training



and development needs. This process ensures that employees are getting the training that is needed to improve work performance; also SCDOT will have the capability to generate training plans for the agency by using the information that is generated from the needs assessment. By using this approach the business objectives will be linked to training and the educational requirements will be customized to meet the needs of the employee and the organization.

In May 2003, SCDOT entered into a contract with Clemson University to develop a workforce plan for the Trades Specialist classifications, which represents nearly half of the total employee workforce. This research project will identify issues, develop solutions, and prepare a workforce plan for the Trades Specialist series. This plan entails extensive data analysis, review of the strategic plan, benchmarking with other state departments of transportation, and field interviews. The processes include the development of career ladders, training requirements, competencies, prototype position descriptions, and cost structure projections for this classification series. Upon completion and implementation of the plan, SCDOT will incorporate the identified training into the SCDOT University in order to develop a more agile and technically trained workforce, with advanced problem solving skills to address future requirements.

During fiscal year 2003, SCDOT spent an average of \$353.47 per employee for training and in FY 2003-2004, \$324.87 was spent per employee. New employees with SCDOT begin their service with a 1-day orientation program. These new employees meet the leadership of the agency and learn more about the agency's mission and values, including doing things the RIGHT way.

SCDOT University is operational and links training initiatives to the strategic plan. The business objectives are linked with a curriculum that includes four basic tracks: employee, supervisor, manager, and executive. A web site has been developed that allows the scheduling of classes on-line. In addition to the new employee orientation, there are a number of courses offered to the staff.

As part of the workforce planning for SCDOT's future staffing requirements, opportunities are available for selected staff including:

- Civil Engineering Training Program (CETP)
- Maintenance Foreman Training
- Leadership Development for Supervisors
- Strategic Training and Education Program for the 21<sup>st</sup> Century (STEP-21)
- Strategic Training for Transportation Agency Representatives (STTAR)

During fiscal year 2003-2004, 729 supervisors and manager were trained in equal employment opportunity and sexual harassment. In this fiscal year another 71 were trained for a total of 800. In addition, supervisors and managers have been trained in basic human resource skills. We are tracking past participants to see if there is a possible correlation between managers having this type of basic training and a reduction in the number of grievances. (See Figure 7.4d – Grievance Numbers.)

### **5.3 How does your employee performance management system, including feedback to and from employees, support high performance?**

The Employee Performance Management System (EPMS) helps bring focus to the agency's mission,



strategic goals and values. Performance evaluations and ongoing input and feedback between staff and supervisors allow SCDOT to continuously refine its focus on meeting the needs of customers and fulfilling the mission of the agency.

In order for managers to focus on communication with employees, SCDOT has developed a computerized program called HR Suite. This program features an integrated approach of managing common data elements that incorporate the Position Description Generation System (automated generic position descriptions for highly populated classifications) (PDGS) and the EPMS. The job duties from the position description are clearly identified and can be transferred to the EPMS document, thereby ensuring consistency. Training and career development planning are also completed during the planning stage. The planning stage allows the employee to participate in their career development at SCDOT. This stage provides an excellent opportunity to revisit the mission, vision, goals, and values of this agency. During the evaluation stage, supervisors rate the employee and review the status of training and career development plans, and use this as an opportunity to discuss career issues and support high performance. Each EPMS document also ties to the agency strategic plan by incorporating initiatives, which support the strategic plan and the goals of the agency.

Prior to 1999, SCDOT was having a problem with “Meets by Default” performance appraisals. The decision was made to go to a universal review date (November 17) and systems were put in place to ensure that employees’ performance appraisals were processed on time. As a result of this change, the EPMS documents are processed on time (100% for 3 years) and the problem of performance appraisals being late was eliminated.

#### **5.4 What formal and/or informal assessment methods and measures do you use to determine employee well being, satisfaction and motivation?**

An Employee Satisfaction Survey was concluded this past year that had over a 90% participation rate. The survey provided insight from over 4300 employees concerning SCDOT’s strengths and opportunities for improvement. This information was then integrated into the agency’s strategic plan. Several actions related to this new approach to the strategic plan have been implemented and many other initiatives are in the works. The overall results of the survey were very positive and extremely informative in critical areas of agency’s operations.

The survey scored on a scale of 1 – 5. Most of the scores were higher than a mean score of 3.0, which was excellent and much higher than other public agencies, including transportation departments that had been surveyed by the consultant conducting the study. After the survey results were analyzed, senior staff communicated the results throughout SCDOT so that all employees were aware of the results. This survey presented results that were positive and allowed opportunities for improvement. SCDOT will administer a second survey after strategic initiatives have been completed over the next year or 2 to measure improvement in the listed categories. Listed below are the highlights of the study:

- 70.2% were satisfied with their job
- 69% of the employees intend to continue employment with SCDOT
- 60.3% are satisfied with SCDOT as a place to work
- 54.9% are satisfied with their supervisor



- 54.2% feel that they are able to express their opinion and get feedback
- 56.6% of the respondents feel that they are involved in decisions related to their work
- 49.8% feel a sense of teamwork at SCDOT
- 56.9% understand the mission of SCDOT
- 52.7% are satisfied with the training they receive

**5.5 How do you maintain a safe, secure and healthy work environment? (Include your workplace preparedness for emergencies and disasters.)**

SCDOT has an actively involved Health and Wellness Program, co-managed by a registered nurse and the agency's benefit coordinators. Most work locations have a volunteer wellness coordinator to assist in communicating between the medical staff and employees. The Health and Wellness Program is designed to promote, protect and improve the health and wellness of the SCDOT workforce. Increasing employee awareness of personal health risks does this. An annual Health Risk Screening is provided to all employees on a voluntary basis. Employees complete a health risk questionnaire that records their medical history and a complete blood work-up is done to identify medical issues. All screenings include a consultation and referral to their physician, if necessary. A total of 2716 employees took advantage of the Health Screening in FY 2003-2004. In addition to health and wellness screening, SCDOT participates in Prevention Partners, Spring Wellness Walk, The Challenge, Weight Watchers, Red Dress Ambassadors, and Heart and Sole Walk.

**Occupational Safety**

Injuries reported in 2003 remained constant with 2002 numbers; however, fewer of these were OSHA recordable injuries, and fewer resulted in time lost. While the average number of lost workdays per lost time injury has increased from 20.66 lost workdays in 2000 to 24.16 in 2003 (an overall increase of 16.9%), this is a significant decrease (17.6%) from the 29.34 average of 2002. Actual days lost dropped from 5537 in 2000 to 4493 in 2003, an 18.9% decrease. In 2002, the federal OSHA standard for calculating lost workdays changed, causing a statistical deviation from previous years that potentially increases the current statistics over the historical rates. This makes the decreases in lost time injuries particularly significant and is strongly indicative of the success of SCDOT's practice of Return to Work strategies and the continued need for full implementation of a Return to Work Program.

In 2003, 518 employees reported injuries, which shows little or no change (-2) from the 520 injuries reported in 2002. Only 401 of these were OSHA recordable cases, which represents a 3.8% decrease compared to the 457 recordable cases reported in 2002. This also reflects a 17.9% decrease in recordable cases from the 489 recordable injuries in 2000. Additionally, injuries reported have decreased by 20.6% from the 652 injuries reported in 2000. During calendar year 2003, there were 2 SCDOT employee fatalities. Two employee fatalities were experienced in 1999; 1 in 2000; 1 in 2001, and 0 in 2002.

OSHA incidence rates reflect the average number of recordable injury cases that occurred during the year. The incidence rate has decreased consistently for the last 3 years, from 9.61 (2000) to 8.10 (2003). This represents a 14.5% decrease since 2000. Additionally, the overall rate remains at less than 10, which is a positive result. (See Figure 7.4e)

The number of injury cases involving lost workdays continued the decreasing trend of the last several years. Lost workday cases have decreased significantly, from 268 in 2000 to 186 in 2003. This represents



a 30.5% decrease since 2000 and is the lowest number of lost-time injuries in 14 years of traceable data.

The South Carolina Chamber of Commerce recognized SCDOT for outstanding occupational safety achievements. Awards were presented to SCDOT headquarters and the following maintenance shops: Marion, Williamsburg, Beaufort, Bamberg, Barnwell, Calhoun, and Hampton Counties.

### **Risk Management**

The Employee Injury, Form 576, and Fatal Crash Location Survey components of the Risk Management Information System (RMIS) are now available to authorized employees on the SCDOT Intranet. The RMIS provides 1 point of entry for all data related to employee injuries, SCDOT vehicle accidents, and documentation of fatal vehicle crash site investigations. The RMIS will soon be expanded to include Claims Against the Department and Claims Against the Public. This system will provide greater access to information and more timely reports to SCDOT management.

Risk Management has improved its ability to combine data from several sources. SCDOT now has the capability to combine data from its insurers with employee data available on the mainframe to produce reports by district and organizational unit.

The fatal crash location investigation process was changed to eliminate the requirement for designated maintenance employees to take photos and video of every fatal crash location on state roads. The new fatal crash location survey process requires only that a designated maintenance employee view the location and submit an abbreviated report describing any road deficiencies at the scene and any corrective action needed. An Intranet Fatal Crash Location Survey system (FCLS) was developed to allow Maintenance units and District staff to quickly determine which reports were still outstanding. This system replaced the previous Crash Scene Documentation Management System (CSDMS).

The Department occasionally leases or borrows both large and small equipment that will be used on a 1-time basis. Risk Management analyzed the costs and benefits of acquiring an inland marine insurance policy for such equipment and recommended that this would be in SCDOT's best interest. The recommendation was approved and the new policy was acquired. SCDOT is now able to provide certificates of insurance to rental equipment providers and avoid paying damage waiver fees for each rental and also avoid paying for any physical damage to leased or borrowed equipment.

### **5.6 What activities are employees involved with that make a positive contribution to the community?**

To be good corporate citizens, SCDOT employees participate in numerous volunteer programs and activities throughout the year such as:

- “Adopt-a-DOT Family”
- Habitat for Humanity
- American Heart Walk
- United Way
- Community Health Charities
- Limited English Proficiency Program (LEP) – A program developed to identify employees (26) who are fluently bi-lingual and interested in providing assistance to customers doing business with



the agency.

- SCDOT CARES (Cares About Roads, Environment and Safety) – A program for elementary school classes.
- First Steps – A program that prepares employees to assist their preschool children and grandchildren for school readiness.
- K-12 Parenting Workshop – A program established to allow interested employees to attend a parenting workshop during lunch.
- Lunch Buddies Program – A voluntary mentoring program for underprivileged children conducted by SCDOT employees.
- Participation in the State Fair (public education)
- “Back to School Bash”
- STTAR Scholarship Program
- Toastmasters
- March of Dimes – Walk America Fundraiser by STEP-21 class
- Groundhog Shadowing Day
- Partnership with Felton Laboratory School
- Career Fairs

### **Summer Transportation Institute**

The Summer Transportation Institute (STI) Program was established in 1993, as a partnership between the FHWA, SCDOT, SCDPS, and South Carolina State University (SCSU). The program expanded in 1996 to include Benedict College and in 2001, Denmark Technical College became a part of the institute. The STI is a four-week program, which includes room and board on college campuses for 9th and 10th grade students. The national curriculum includes academics, engineering, career speakers, field trips, and SAT preparation. The 2003 participation included 44 students.



## CATEGORY 6: PROCESS MANAGEMENT

---

### 6.1 Key design and delivery processes for services

All SCDOT design and delivery processes relate to the mission of building and maintaining roads and bridges and in administering mass transit services. Therefore, the key processes are as follows:

- Construction
- Road and Highway - Maintenance and Preservation
- Traffic Operations
- Toll Operations
- Enhancements
- Mass Transit
- Adopt-A-Highway
- Highway Safety

### CONSTRUCTION

During 2003-2004, SCDOT has continued to refine its partnering activities with its contractors and has completed a new construction manual.

#### Construction Underway



South Carolina is beginning to reap the benefits of the “27 in 7 Peak Performance” highway and bridge construction program. This program, initiated in 1999, uses a combination of innovative financing and contracting programs to complete 27 years of work in 7 years. The program uses Construction Resource Managers (CRMs) from private contracting firms to assist the agency in completing approximately 200 road and bridge projects. This enables SCDOT to complete the work without hiring additional staff. Figure 7.3a indicates the growth in dollars committed to construction over the past 3 years.

**Carolina Bays Parkway** - Construction was completed on Phase I of the Carolina Bays Parkway and opened to traffic on December 17, 2002. The 6-lane interstate standard road stretches for 20 miles between SC 9 and US 501. Phase II of the parkway is currently under construction between US 501 and SC 544. This segment is about 5 miles and construction is anticipated to be complete by Fall 2004.

**Cooper River Bridge** - In the 3 years since ground was broken for the new Cooper River Bridge, the SCDOT contractor, Palmetto Bridge Constructors (PBC), is more than 85% complete with the design-build contract. Work remains on schedule to finish the project as early as 1 year in advance of the July 15, 2006 completion date set in the contract. This means that traffic in both the northbound and the southbound directions will be using the new bridge by mid-2005. SCDOT has continued the environmental analysis and preliminary design for the project to demolish and remove the existing Grace and Pearman Bridges so that the funding package can be completed.

## Construction Resource Managers (CRM)

Because of its accelerated program, SCDOT had to be innovative to meet increased construction demands. FY 1999-2000 saw the addition of the CRM as an essential part of the “27 in 7 Peak Performance” construction program. Two CRM firms are under contract with SCDOT to assist managing 90 of the 200 construction projects that will be built in 7 years. The SCDOT accelerated bonded construction program increased the agency’s workload by a factor of 2.5 for several years. Without the assistance of the CRM firms, SCDOT would have to employ approximately 500 additional employees to meet the demand of the accelerated construction program. The 2 CRM firms act as an extension of SCDOT and report to agency program managers. Some of the accomplishments during the past year include:

- Utilization of over 300 employees working in the areas of project management, engineering, design, right-of-way acquisition, construction, inspection, and testing.
- As of June 2004, over 1312 lane-miles of construction managed by the CRM firms were underway or completed throughout the state. There are 31 projects that have been completed.
- Continued use of the previously developed Financial Management System for the tracking and financial analysis of all SCDOT projects/progress.
- Implementation of a Program Controls System for agency-wide use.
- To date, the CRM firms have completed work on 4083 right-of-way parcels that have been purchased for construction of highways, while maintaining a condemnation rate of less than 10%.
- In partnership with SCDOT staff engineers, achieved savings of over \$40 million by making cost saving recommendations related to design and construction on highway improvement projects.

There are currently 59 projects in progress, including 1 in preliminary design, 3 projects in the right-of-way plan development stage, 19 projects in final plan development, and 36 projects under construction. There are 31 projects completed and open to traffic.

## Construction Projects Completed (2003-2004)

During fiscal year 2003-2004, 236 road and bridge projects totaling \$576.93 million were accepted for state maintenance by the agency. This included 30 federal/state bridge projects for 12.336 miles, totaling \$93.92 million; 34 state secondary projects for 250.41 miles, totaling \$14.30 million; 26 special-match projects for 135.65 miles, totaling \$19.69 million; 14 interstate projects for 50.01 miles, totaling \$129.83 million; 63 primary/urban projects for 599.01 miles, totaling \$288.03 million; 12 maintenance projects (chip seal and full depth patching) for 696.13 miles, totaling \$6.66 million; and 57 other (pavement marking, landscaping, resigning, etc.) for 11,530.27 miles, totaling \$24.51 million.



### **Notable Projects Completed in FY 2003-2004**

- Phase I of the John N. Hardee Expressway between SC 302 and SC 602 opened to traffic on July 12, 2004.
- Phase I of the Palmetto Parkway from the Savannah River to US Route 1 was opened to traffic on June 24, 2004.
- Completion of a 10-mile widening and resurfacing project on I-95 in Florence County.
- The widening of US 501 and the addition of frontage roads have been completed in Myrtle Beach.

### **ROAD and HIGHWAY - MAINTENANCE and PRESERVATION**

SCDOT has the responsibility for maintaining the **fourth largest state highway system in the nation**, and does so at one of the lowest funding per mile in the nation. SCDOT expends \$5,044 per mile on maintenance, which is well below the national average of \$16,478 per mile. The maintenance budget for 2002 was \$196,800,000; due to the reduction in available state funds, the budget decreased to \$190,000,000 in 2003.

#### ***Key Maintenance Functions***

- **Chip Seal:** Chip seal is a road surface treatment where a coating of asphalt emulsion is sprayed on the road to seal the surface from water intrusion and is followed by a layer of small stone. It is intended to prolong the life of the secondary routes until funds are available for hot-mix resurfacing. During fiscal year 2003-2004, 1681 miles were surface treated. This is 394 miles short of our established goal, due to the shortage of stone used for this operation.
- **Drainage Structures:** Early detection of drainage problems along state maintained routes is the by-product of the inspection of our drainage structures. Improvements to the drainage system can make our highways safer by enhancing water runoff and increasing the life of the roadway. The goal of 8349 miles of drainage structures to be inspected and problems identified.
- **Secondary Road Inspections:** Completed a secondary road inspection program to provide comparative condition information of secondary roads statewide. This is a major asset when SCDOT is conducting trade-off analysis of where to dedicate limited resources.
- **Hurricane Evacuation Preparation:** Hurricane evacuation preparations completed, as requested by the Governor. Crossovers were completed on US 501; intersection improvements were made at US 17/US 21.
- **Winter Storms:** Maintained a highway system and kept traffic flowing in one of the heaviest snowfalls in 30 years.
- **Pavement Preservation Program:** Developed a comprehensive pavement preservation program for the next 2 years, made possible by the FHWA, using administrative soft match federal funds freeing up state funding for maintenance.



- **Traffic Safety:** Safety improvements performed include traffic signal upgrades and replacements. The number of traffic signals replaced during the past year was 356, which exceeded the goal of 226.

## **Pavement Condition**

The Office of Pavement Management collects pavement condition, GPS and digital image data on all 3 major road systems: Interstates, US and SC routes, and secondary routes. Pavement Management has 2 very specific responsibilities: 1) to collect data only on travel lanes (excluding bridges); and 2) to provide a network view of the roads and highways in South Carolina.

An overall measure of pavement quality is calculated from the pavement condition data collected by Pavement Management. This measure is called the Pavement Quality Index, or PQI. The index ranges from zero to five, with five being a perfect road. The five condition classifications and their PQI ranges are 1) Very Good (PQI = 4.1 to 5.0); 2) Good (PQI = 3.4 to 4.0); 3) Fair (PQI = 2.7 to 3.3); 4) Poor (PQI = 2.0 to 2.6); and 5) Very Poor (PQI = 0.0 to 1.9).

Trends for the interstate system show the average condition of these pavements declining for 2002-2003, but slightly increasing for 2004. The most recent overall PQI for the US and SC routes is 3.20. The secondary system has an overall PQI of 3.23. A secondary system measure must be interpreted differently from the interpretation of the same measure when applied to other systems. For example, secondary roads are much rougher than the roads that comprise the interstates, US, and SC systems.

In conclusion, network data collected by pavement management shows that the condition of the primary systems - the interstates and US and SC routes - has deteriorated in recent years, though rehabilitation brought the interstate PQI up slightly in 2004. The secondary system, although having only one collection of system-wide data completed, shows a PQI in the "Fair" range, accompanied by a high degree of roughness across the system.

## **Bridge Maintenance**

SCDOT uses a Bridge Management System (BMS). The development, implementation, and data collection of the BMS began in the early 1990's, with full-scale operations starting in 1998. The system provides detailed analyses of South Carolina's bridge needs and priority recommendations. Although replacement projects have been the primary focus, improvements such as widenings and raisings, and maintenance repairs and rehabilitations are now being considered.

Statewide bridge inspection continues to be a critical component of the highway safety and the eligibility for federal-aid Bridge Program Funds. SCDOT inspects approximately 6500 bridges per year and contracts for underwater bridge inspections of approximately 60 bridges per year. Data collected from inspection and maintenance activities are an integral part of the BMS.

Another item included in past reporting has been the number of state-owned substandard bridges. The number of substandard bridges continues to increase. The current bridge funding level mentioned earlier is far below that required to make significant improvements. Some of the primary factors that affect this trend are the overall construction history and age of the bridge infrastructure, historical lack of emphasis on bridge maintenance, and inadequate funding levels. Even though SCDOT uses a BMS, it is difficult to



overcome the lack of proper funding. This overall trend of an increase in substandard bridges is expected to continue because of a lack of funding and the growing transportation needs of the state. Figure 7.2a depicts historical trend line data for the Deck Area of Structurally Deficient Bridges.

## **TRAFFIC OPERATIONS**

### **Intelligent Transportation Systems**

SCDOT has developed and deployed Intelligent Transportation Systems (ITS) across the state. These systems include the latest transportation technologies, such as closed circuit television cameras, highway advisory radios, changeable message signs, local Traffic Control Centers (TCC) and a central Traffic Management Center (TMC).

## **TOLL OPERATIONS**

SCDOT currently owns 1 toll facility in the Low country - the Cross Island Parkway (CIP) and monitors a public/private partnership toll facility in the upstate - the Southern Connector. The CIP is a 7.5-mile toll road, located on Hilton Head Island, provides an alternative route to the south end of the island and serves as a designated hurricane evacuation route. Daily operations and maintenance of the toll facility are privatized with monitoring provided by the agency's Toll Operations Center (TOC).

The TOC is persistent in maximizing toll violation collection efficiency, while maintaining a high level of customer service. Customer service provided by the TOC was evaluated through a survey. Nearly 80% of those surveyed agreed that the TOC provides a valuable service with quality personnel. The TOC recognizes that it is only as good as its people. Hence, TOC staff once again exceeded their training requirements this fiscal year.

The popularity of the CIP continues to grow, with traffic increasing over 3% this fiscal year, having over 8 million vehicles passing through the facility. Revenues from toll operations totaled in excess of \$5.7 million in FY 2003-2004. Due to refinancing of project bonds last fiscal year, CIP revenues exceeded expenses by nearly \$1 million. By utilizing other state agency resources, the TOC will be able to collect supplemental revenues from out-of-state violation collection in the upcoming fiscal year. Additionally, automation will streamline revenue exchange between the state's 2 toll facilities.

Modifications to signing and striping within the main plaza area have reduced speeds by as much as 18%. To maintain safe conditions for the motoring public, SCDOT continues to partner with the sheriff of Beaufort County.

## **ENHANCEMENTS**

The objective of the enhancements program is to improve the appearance of South Carolina highways and other transportation facilities. SCDOT is implementing with a statewide initiative to improve accommodations for bicycles, pedestrians and other non-motorized forms of transportation. Planning is currently underway for a third annual Pedestrian and Bicycle Conference October 2004. Below is evidence of the number of partners interested in the beautification and enhancement of South Carolina.

<b>SCDOT Transportation Enhancement Program MPO &amp; Non-MPO</b>			
	<b>Applications Submitted</b>	<b>Applications Funded</b>	<b>\$ Contributed by SCDOT</b>
<b>2003 MPO</b>	32	32	\$2,587,207
<b>2003 Non-MPO</b>	105	53	8,336,000
<b>2004 MPO</b>	73	73	8,854,195
<b>2004 Non-MPO</b>	82	68	10,200,000

**Figure 6.1a**

Federal regulations provide that a certain portion of federal highway dollars be used exclusively for beautification and enhancement purposes. SCDOT is not allowed to use these funds for highway construction or even maintenance of existing highways. Therefore, SCDOT continues to pursue beautification projects that encourage our visitors and citizens to develop a favorable and lasting impression of South Carolina. Partnership agreements with local government entities for long-term landscape maintenance are required. Interchange project funding is provided at a 70%/30% level. Interested local government entities provide the 30% match, up to a maximum of \$120,000.

Interchange projects provide landscaping and color along South Carolina's highways, ideally approximately every 30 miles. On the urban interstate system in South Carolina, it would be desirable to have as many beautified interchanges as possible, provided that the landscaping is maintained by local government entities by partnership agreements. The following is a list of accomplishments during the past fiscal year from the Statewide Beautification Program:

### **Gateways**

- I-95 North Gateway, Dillon County, phase 2--currently under construction
- I-95 South Gateway, Jasper County, phase 2--soon to be under construction

### **Interchanges**

- I-95/US 17 Point South interchange--complete
- I-95/SC 6 Santee interchange landscaping--soon to be under construction
- I-95/US 52 Florence interchange landscaping--soon to be advertised for letting
- I-26/US 378 interchange landscaping--plans are currently under design
- Upgrades of landscaping at some of the older rest areas--concept plans currently being developed

### Community Interest Projects

- I-26/US 17A (exit 199) Summerville interchange landscaping--awaiting partnership agreements for long-term maintenance
- I-77 Dave Lyle Boulevard--under discussion with the City of Rock Hill
- One of the I-26 Newberry interchanges (probably SC 219)--under discussion with the City of Newberry and Newberry County

Each year, the SCDOT Commission also provides enhancement funds for the Adopt-An-Interchange program. SCDOT partners with local governments to provide a higher level of beautification at key interchanges along interstates and controlled access highways. A unique feature of this matching funds program is that applications for funding are accepted throughout the year until the financial resources are exhausted. Below are the Adopt-An-Interchange projects completed or near completion.

- I-26/US 176 (Broad River Road) in Irmo--complete
- I-85/SC 187 (Exit 14) in Anderson County--complete
- I-95/ Hwy 261 in Manning--complete
- I-95/US 17 Hardeeville--almost complete landscaping

### ADOPT-A-HIGHWAY

Litter abatement is another important facet of SCDOT's enhancement efforts. For 16 years, the Adopt-A-Highway Program has provided an effective channel for cultivating public commitment to keeping our highways clean. SCDOT county maintenance units and county coordinators oversee the Adopt-A-Highway Program on a local level, and all 46 counties in the state participate in the program. The Adopt-A-Highway volunteers, who clean up roadside litter at least 3 times a year, are one of our state's most valuable resources. Adopt-A-Highway volunteers continue to produce impressive results in their fight against litter. (See Figure 6.1b below.)

SCDOT Adopt-A-Highway Statistics				
	Pounds	Miles	Groups	Volunteers
2001	1,999,199	7,683	2,249	34,869
2002	1,970,364	7,679	2,032	33,284
2003	1,897,156	6,414	2,146	29,430
TOTALS	5,866,719	21,776	6,427	97,583

**Figure 6.1b**

Educating the public about Adopt-A-Highway and the litter problem in South Carolina is the main objective of the program. County coordinators and SCDOT employees dedicate countless hours informing the public of the importance of litter prevention and encouraging groups to adopt sections of highways. To assist in these efforts, promotional items have been developed for the Adopt-A-Highway program, including informational brochures, stickers, safety handouts, car-litter bags, and pencils. Additionally, a toll-free line, web page and e-mail address assist with the dissemination of information to the public.

SCDOT also demonstrates its commitment to a cleaner South Carolina by holding two annual weeklong cleanups, conducted by the maintenance employees throughout the state. These special events provide



another opportunity for the state's roadways to be cleaned, call attention to SCDOT litter abatement efforts, and increase litter awareness among South Carolina's citizens.

## **MASS TRANSIT**

SCDOT's Office of Mass Transit supports public transit operations around the state through the administration of federal and state transit funds. Currently, the Office of Mass Transit oversees federal and/or state transportation funds for approximately 110 human service providers, 15 rural public transit agencies, 4 urban public transit systems, 10 Metropolitan Planning Organization, and 5 Council of Governments.

During July 2003, the FTA conducted a State Management Review of management practices and program implementation to evaluate compliance with federal laws and regulations that govern transit operations within the state. The SCDOT Office of Mass Transit was evaluated on 19 program areas of which only 5 minor findings were documented. The review team acknowledged that the SCDOT Office of Mass Transit has made substantial improvements in the administration of all federal transit programs. The review team reported to the SCDOT Executive Director that the staff of the Office of Mass Transit should be commended for their dedication, professionalism and knowledge of FTA requirements and standards.

### **Coordination of Public Transit Activities**

*Transportation Comes to Allendale County in the form of The Allendale County "SCOOTER" – Allendale County is one of the most financially depressed counties in the state; without a viable means of transportation for its citizens. For the last 10 months, the newly formed Lower Savannah Regional Transportation Management Agency (LSRTMA), Low-country Regional Transportation Authority (LRTA), and dedicated partners from Allendale County have succeeded in developing a transportation system using capital assets of various human service agencies from within the County of Allendale, along with funding from several state and local agencies. The "SCOOTER" brings a reliable, cost efficient mode of transportation to the general public, elderly, and persons with disabilities that will boost the quality of life of individuals that have no other means of transportation.*

### **Transit Facilities**

Over the last year, the SCDOT Office of Mass Transit has performed an assessment of the transit facilities supporting public transportation. As of July 30, 2004, the assessment has identified approximately \$20 million in facility needs. SCDOT received a Congressional Earmark for facilities upgrade in the amount of \$982,260, which will be apportioned to the transit agency that has the greatest need based on the assessment. The goal of the facilities improvement program is to renovate, refurbish, and replace transit facilities.





## **Purchase of Vehicles**

The goal of the Transit Vehicle Acquisition Program is to purchase new vehicles for each transit agency. The purchase of new transit vehicles was added as an additional approach to increase maintenance savings. The more modern vehicles would require less replacement work, due to aging parts, and should reduce overall maintenance costs. Transit vehicle purchases are tracked quarterly, with a total of 43 vehicles that have been acquired over the last 2 quarters. The quarterly acquisition level is anticipated to fluctuate as the number of vehicle purchases varies for each quarter. The SCDOT Office of Mass Transit has continued to explore other feasible options with the transit properties that might aid in reducing maintenance costs. An aggressive program to replace the aging bus fleet is underway. (See Figures 7.3c and 7.3d for ridership and maintenance data.)

## **Statewide Transportation Coordination Plan**

The existence of multiple agencies operating transportation services within many of the same communities in the state has prompted the need for a comprehensive evaluation and coordinated plan for service delivery. Accordingly, SCDOT has been communicating with representatives of other state agencies that are involved in client transportation services or the funding of such services.

## **SMARTRIDE Commuter Service**

In an effort to decrease traffic congestion during drive times, SCDOT in conjunction with Central Midlands and Santee Wateree RTA completed research in the fall of 2003. As a result of the positive data collected during the research project in October, SCDOT determined that there is significant support for a commuter service into Columbia from neighboring towns and cities. In June 2004, "SMARTRIDE" returned to Columbia from both Newberry and Camden

Every morning, thousands of commuters flood the interstates heading into Columbia for work. Santee Wateree Regional Transportation Authority (RTA) began commuter service originating from Camden to the Columbia Metro Area. The Central Midlands Regional Transportation Authority began commuter service to Columbia from the city of Newberry with stops in Little Mountain and Chapin. With fuel prices soaring at such an incredible rate, this service is very timely and saves on gas and the stress of rush hour traffic.

To make "SMARTRIDE" more appealing and to demonstrate to commuters that this service will be reliable, both Santee Wateree and Central Midlands RTA offered commuters free rides during the month of June. Beginning in July commuters were able to purchase weekly ride passes for around \$20.00. That means that commuters pay \$4.00 dollars a day for a restful and relaxing commute, devoid of the headaches and stress associated with commuting.

## **HIGHWAY SAFETY**

SCDOT began numerous major initiatives to improve highway safety in 2000. Vehicle miles traveled is up



7.9% from 1999, and the number of licensed drivers and registered vehicles has increased, making reductions even more significant. The number of non-fatal traffic injuries *declined* by 9.9% from 55,322 in 1999 to 51,267 in 2003, and the number of South Carolinians injured in a crash *dropped* from 1 in 69 to 1 in 78.

The state's mileage death rate (MDR, or the number of traffic deaths per 100 million vehicle miles) *dropped* 16.6%, from 2.4 in 1999 to an estimated 2.0 in 2003. In 1999, the state's MDR was 60% higher than the national average; now it is 33% higher. ***The 2.0 MDR is the lowest MDR ever achieved in South Carolina since records have been kept.*** The drop in the death rate is very significant; we will continue to monitor the data to see if this is a continuing trend.

SCDOT has been successful in its efforts to reduce fatalities on the interstate. SCDOT's initiatives included installing cable barrier in narrow medians, reducing speed limits in urban areas, and implementing truck lane restrictions on interstate segments having six or more lanes. These efforts helped reduce fatalities on the interstate system 40% since 2000. Without these initiatives, South Carolina's total fatalities would have increased an estimated 6%.

### **Interstate Median Barriers**

SCDOT and FHWA continued its joint goal to reduce interstate median crossover crashes, and resulting fatalities, by installing cable median barriers during FY 2002-2003. Phase III of the program to install median barriers on segments of the interstate having median widths of 72 feet or less began this year and is essentially complete. A total of 421 miles of cable barrier has been installed since January 2001. Due to the success on the interstates, the cable barrier program has been expanded to non-interstate controlled access facilities.

To date, the 421 miles of installed median cable have been hit over 5,500 times by errant vehicles resulting in only 18 fatalities. The cable median barrier has been over 99% effective in saving lives. To ensure that damaged cable is promptly returned to service after a crash, a statewide maintenance contract for repair of the cable barrier has been implemented. All cable damage is being repaired within 96 hours of being reported, with repair cost averaging around \$750 per hit. In an effort to reduce the number of crashes involving the cable median barrier, SCDOT and FHWA identified the top five areas with the highest number of crashes. Improvements have been programmed and 2 areas are currently under contract.

### **Interchange RUSH**

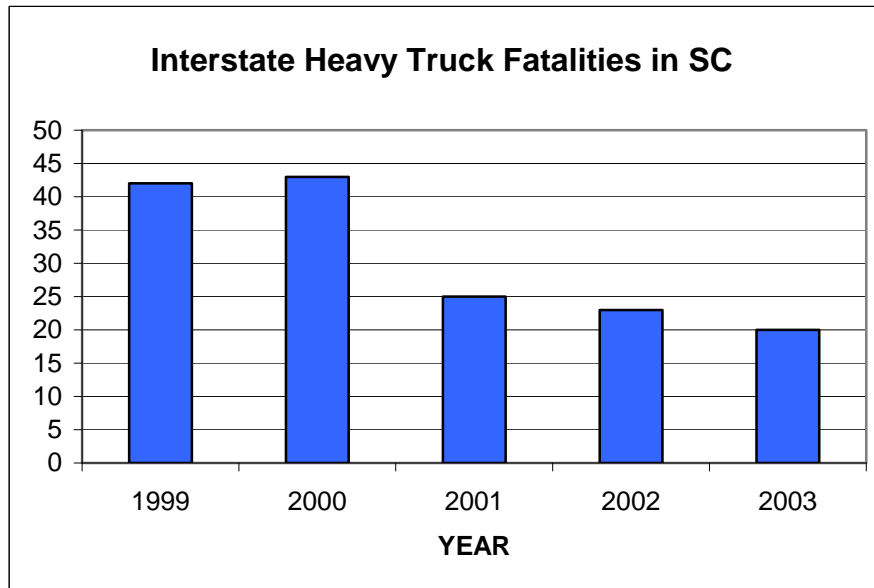
The Ramp Upgrades for Safer Highways (RUSH) was created to develop low-cost improvements to high-crash interchanges. Analysis indicated that crashes occurring near certain interchanges were above the average for the interstate system. Speed differential was a contributing cause to these crashes. SCDOT began a program to improve safety at these interchanges by lengthening acceleration and deceleration ramps and other safety treatments. To date, 27 projects have been completed, and the development of additional projects is currently ongoing.

### **Truck-Lane Restrictions**

This year, SCDOT and FHWA continued the truck-lane restrictions on interstate sections having six lanes



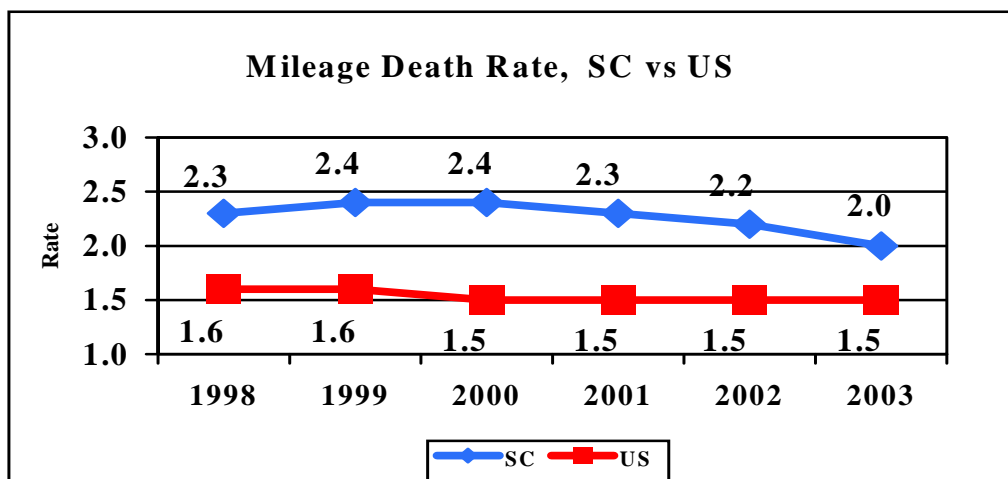
or more based on recommendations from a pilot study. A pilot study was conducted on I-85 in Anderson and Spartanburg Counties. During the pilot study, the number of crashes involving heavy trucks was down 17% with no fatalities. The number of crashes with injuries was down 72%. Since implementing 111 miles of Restricted Truck Lanes, interstate truck fatalities are down by 52% between 2000 and 2003, which is depicted in the chart below.



**Figure 6.1c**  
**Safety Challenge**

As previously discussed, SCDOT has been successful in its efforts to reduce fatalities on its interstate. The state's mileage death rate (MDR, or the number of traffic deaths per 100 million vehicle miles) dropped 16.6%, from 2.4 in 1999 to an estimated 2.0 in 2003. In 1999, the state's MDR was 60% higher than the national average; now it is 33% higher.

**Figure 6.1d**



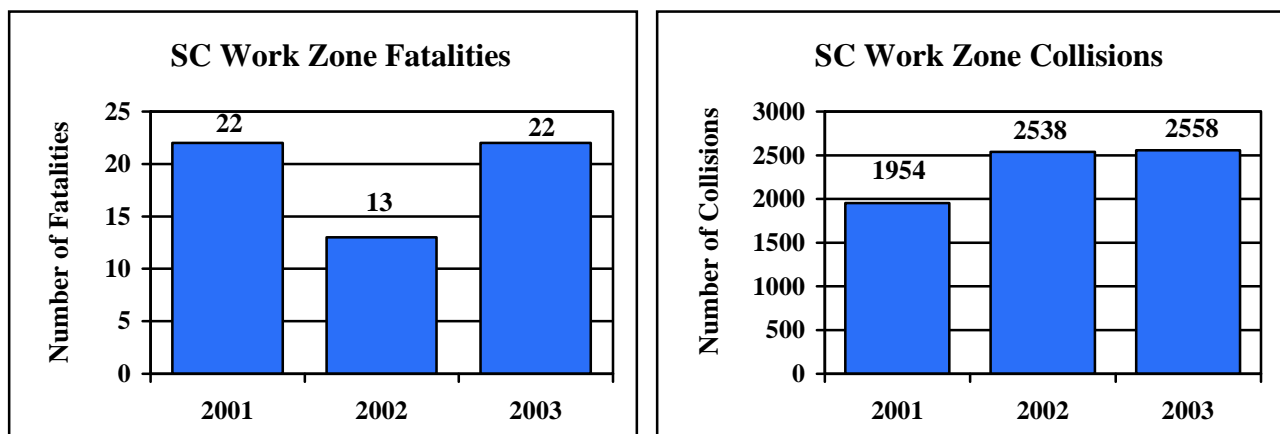
The major challenge facing SCDOT is reducing highway fatalities on South Carolina's secondary road

system. Two out of 3 highway deaths occur on our secondary roads. Unfortunately, funding for improvements is limited. Although South Carolina received a large increase in funding from the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), most federal highway funds are not eligible for improving 78% of the secondary road mileage in South Carolina. The increase in federal funds and match requirement has also significantly reduced available state funding for improvements on secondary routes. SCDOT is seeking additional funding from the legislature. One objective of the funding package is to create a state-funded safety program to reduce the fatality rate on these roads.

### Work Zone Crash Statistics

During 1999, there were 889 traffic crashes reported in South Carolina work zones; in 2000, 946 work zone crashes were reported. This represents an increase of 6.4%. Nine people were killed in work zone crashes in 1999; in 2000, ten work zone fatalities were reported, an increase of 11.1%. To address continued increase in work zone crashes, a comprehensive work zone safety campaign was implemented in April 2001.

In 2001, the reporting methodology for work zone crashes changed dramatically. The new method provides a more comprehensive picture of work zone crashes but is not comparable to prior years' data. Using this new methodology there were 1,954 work zone crashes in the state. This is just under 2% of the state's total crashes. There were 21 fatalities reported in traffic crashes in the state's work zones. While a reduction in work zone fatalities was seen in 2002, the number climbed again in 2003, equal to the 2001 total. The rate of increase in work zone collisions slowed between 2002 and 2003.



Figures 6.1e and 6.1f

### 6.2 Meeting Key Performance Requirements

SCDOT ensures that key performance requirements are met by the development of performance measures that are incorporated in SCDOT Strategic Plan. Additionally, process owners are held accountable and are assessed in the annual EPMS.

The Office of Construction continues to use Quality Assurance Teams to ensure that roads and bridges are constructed to specification and that quality materials are used throughout the project. The staff of the

Research and Materials Laboratory (RML), including district laboratories in Charleston, Greenville, and Florence, provides technical assistance to district and CRM personnel on material matters statewide. Field technicians and materials engineers from the central and district laboratories routinely visit projects statewide in order to assure that proper sampling and testing procedures are being followed and all field testing equipment is calibrated and in proper working order.

### **Supplier/Consultant Support**

SCDOT is providing customer service to design/build contractors by providing oversight and technical services from its RML. Inspectors from the RML, who are trained and certified in all areas of sampling and testing, have been temporarily assigned to the quality assurance monitoring of such projects. SCDOT has provided these quality assurance services for the Conway Bypass project and the Carolina Bays Parkway project.

### **Research**

SCDOT receives federal funds for research through the State Planning and Research (SPR) Program. Though each year's funds are usually available shortly after October 1 (the beginning of the federal fiscal year) all the FY 2003-2004 research funds have not been received due to reauthorization. It is anticipated that the remainder of the funds will be received soon and will total approximately the same as last year's amount of \$2.1 million, federal portion. Most projects included in the program require a 20% state match. Though funding has been slowed, efforts have continued to expand and broaden the scope of the research program to include all areas of the agency, as well as to emphasize goals and objectives contained in the strategic plan.

In FY 2003-2004, the department hosted its first research workshop to market the research program, to identify a wide array of potentially beneficial research topics, and to develop a prioritized list of the proposed topics for the Research and Development Executive Committee (RDEC) to consider for development as research projects. The workshop, with over ninety participants including representatives from the DOT, FHWA, USGS, academia, and industry, was a success. As a result, more than 70 topics were suggested for research.

Through its balloting process, RDEC approved 13 topics for inclusion in the SPR Research Program. The approved projects span a wide range of the agency's activities and all relate to the strategic plan. Three of the studies pertain to the number 1 goal of increasing safety on the transportation system. One project is in the area of measuring customer satisfaction through a survey of the public to assess their perception of the performance of the SCDOT. Another study is related to the goal of improving and expanding the multi-modal transportation system in the state. The remaining approved projects all pertain to the goal of improving the quality, efficiency, and appearance of the highway system.

Research projects continuing during FY 2003-2004 include 2 related to work zone safety and 2 that are addressing the agency's goal of enhancing skills and providing opportunities for employees. Finally, a research project was completed during FY 2003-2004 related to improving customer service. The study, "Customer Input Concerning Highway Maintenance," used a survey to identify what the users of the highway system in South Carolina want and expect from maintenance operations.



## Material Source Monitoring

Consistent review and monitoring of materials sources is a major service provided by the RML. Key to this effort is the maintenance of over 50 listings of approved sources for a wide variety of products ranging from aggregate to elastomeric bearing pads for bridges. Level of funding has allowed the research program to continue to expand and broaden its scope to include areas of SCDOT not previously included in the program, as well as to emphasize goals and objectives contained in the strategic plan.

To be included on SCDOT's Approved Sources Listing, each material source must typically provide a detailed quality control plan, as well as key test results and product certifications. To the greatest extent possible, the RML performs testing to verify the properties claimed by suppliers; whenever a sample with failing test results is encountered, a copy of the test report is provided to the supplier. The RML then works with the supplier to ensure that they maintain adequate levels of quality. Engineers at the RML monitor trends in supplier quality control testing and investigate problem areas.

The number of approved sources for materials and services continues to expand. Over the last year, 2 new listings have been initiated. These listings include detectable warning surfaces and reinforced concrete floorless culverts. As highway construction becomes more complex, the number of approval listings will continue to increase, allowing innovative new products to be incorporated in our construction while maintaining materials quality.

## 6.3 Key Support Processes

The key support processes of SCDOT include those activities that provide administrative and logistical support. These processes include Administration, Information Technology Services, Supply and Equipment, Facilities Engineering, Finance and Accounting, Legal, Human Resources, Employee Support Services, Staff Development and Training Offices. All key support processes are aligned to support SCDOT's mission and are linked to support the goals in the strategic plan. The people that perform the support processes are focused on the mission of SCDOT. They are part of a larger process of building and maintaining roads and providing mass transit services.

### Procurement

In 2004, the Universal Public Purchasing Certification council recognized the SCDOT Procurement Office for having a fully certified staff. Only 24 public agencies in the United States and Canada were qualified to earn this prestigious honor in 2004. SCDOT's procurement staff has been recognized as a model agency that is committed to professionalism and has demonstrated that commitment through the Certified Public Purchasing Officer and Certified Public Procurement Buyer designations. Dedication and leadership is essential in achieving this honor. SCDOT was recognized for this honor at the 2004 NIGP (National Institute of Governmental Purchasing, Inc.) Forum in Biloxi, Mississippi, and received a *Certificate of Excellence*.

### Information Technology

SCDOT depends upon information technology to help employees fulfill the agency's mission and achieve



strategic goals. IT Services supports the following software systems:

- Risk Management System
- Sign Inventory Module for the Highway Maintenance Management System (HMMS)
- Signal Inventory Forms
- Accounts Receivable Billing and Cash Receipts System
- Online Budget/Expenditure System
- Procurement EDMS
- Microsoft Outlook Web Access
- Project Web (web based road plans)
- Site Manager™ (construction) Management
- Highway Maintenance Management System (daily work and planning)
- Bridge Management System (detailed analysis of bridge conditions and needs)
- Pavement Management System (pavement quality indicator)
- Road Inventory Management System (includes traffic density and pavement quality)
- Electronic Bidding for highway construction contracts, and
- Transportation Equipment Replacement Model.
- Proposals and Estimates (PES)
- Letting and Awards (LAS)

#### **6.4 Management of Key Suppliers/Contractors/Partner Interactions and Processes to Improve Performance**

SCDOT has established an Office of CRM Operations, headed by an engineering director who coordinates and supports CRM Operations. SCDOT uses a variety of methods to improve performance of key suppliers, contractors, and partners. SCDOT has a well-established Quality Assurance Program supported by the RML, Contract Audit Services, and a Procurement monitoring process. SCDOT program managers are involved in construction projects from the beginning until project completion. The Director of CRM Operations monitors the work product and costs of the CRM Program.

SCDOT measures Minority Business Enterprise participation. The state requires each agency to set a goal of 10% of controllable dollars to be spent with suppliers/contractors/partners. In FY 2003-2004, SCDOT exceeded its goal by 6.3%; which is a total of 16.3% of controllable dollars being spent with minority businesses. SCDOT administered 690 contracts with only 9 vendor complaints, indicating 98.7% of contracts completed without significant complaints, compared to FY 2002-2003 when we completed 97% of contacts without a complaint.

#### **Innovations in Property Management**

SCDOT owns and manages a large portfolio of state property, the majority of which is acquired for rights-of-way. In 2004, all property was inventoried and segregated by those parcels used for rights-of-way and those used for business purposes. The property was further segregated by those parcels in use, surplus, and those to be used later. In October 2003, 2 real estate companies, Edens and Avant and Colliers-Keenan were selected to assist SCDOT in the sale of surplus property. The efforts of these realtors and the in-



house Property Management Office resulted in sales amounting to \$2,557,329, an increase of 28% over last year. Additionally, the Director of Maintenance, Assets Management, and District Engineering Administrators are developing long-range plans to use our facilities more efficiently that may include consolidation or elimination of some facilities.

SCDOT used an innovative process for disposing of surplus structures when 14 homes in the Hunters Ridge Community in Horry County were impacted by the construction of the Carolina Bays Parkway. When SCDOT tried to follow the normal process of disposing of surplus structures, not enough interest was generated from prospective buyers because of issues involving homeowners associations and liability for subdivision roadways. SCDOT partnered with a real estate consultant and sold the homes at an absolute auction. The consultant made arrangements with several home-moving companies to contract with prospective bidders about moving costs. As a result, all 14 homes were sold. SCDOT received an "Honorable Mention Award" from FHWA in the 2003 Excellence in Right-of-Way Award competition.

### **Innovations in Finance and Cost Efficiency**

SCDOT has partnered with FHWA staff to continue effectively managing construction contracts and to improve the Financial Management System (FMSP). Through the improved FMSP, SCDOT is able to maximize available resources by enhancing its capability to forecast construction payouts. Departments of transportation in Oregon, Kentucky, North Carolina, and Washington have sent financial and engineering staff to learn about FMSP. Of particular interest is the FSMP application in the bonding program.

An essential partner of SCDOT is the South Carolina Department of Revenue (SCDOR), who collects the state fuel user fee. In an effort to maximize the collection of user fees, an automated motor fuel tax collection and auditing system titled "ZYTAX" was purchased by SCDOT. In a partnership with SCDOT and FHWA, "ZYTAX" was successfully completed on schedule and launched to motor fuel tax customers in April 2004.



## CATEGORY 7 – BUSINESS RESULTS

### 7.1 Performance Levels and Trends for Customer Satisfaction

The Incident Response Teams is a key component of the South Carolina Intelligent Transportation System and is used to aid stranded motorists and assist in evacuations. Figure 7.1a depicts the number of motorists assisted over the past 3 years.

AREAS	FY 2002	FY 2003	FY 2004
Columbia	7,477	8,639	8,883
Upstate (Greenville and Spartanburg)	10,937	12,103	11,733
Rock Hill	4,058	4,016	3,566
Charleston	12,462	14,880	17,121
Anderson	6,447	9,122	10,498
Myrtle Beach	8,299	10,313	10,505
Beaufort	388	1,175	6,352
Florence	478	8,184	9,448
Cherokee	0	0	1,580
<b>Total Reponses</b>	<b>50,546</b>	<b>68,432</b>	<b>79,686</b>

Figure 7.1a

**Reduction of the Condemnation Rate.** The objective is to improve customer satisfaction in right-of-way transactions. The chart below depicts a decrease in the condemnation rate.

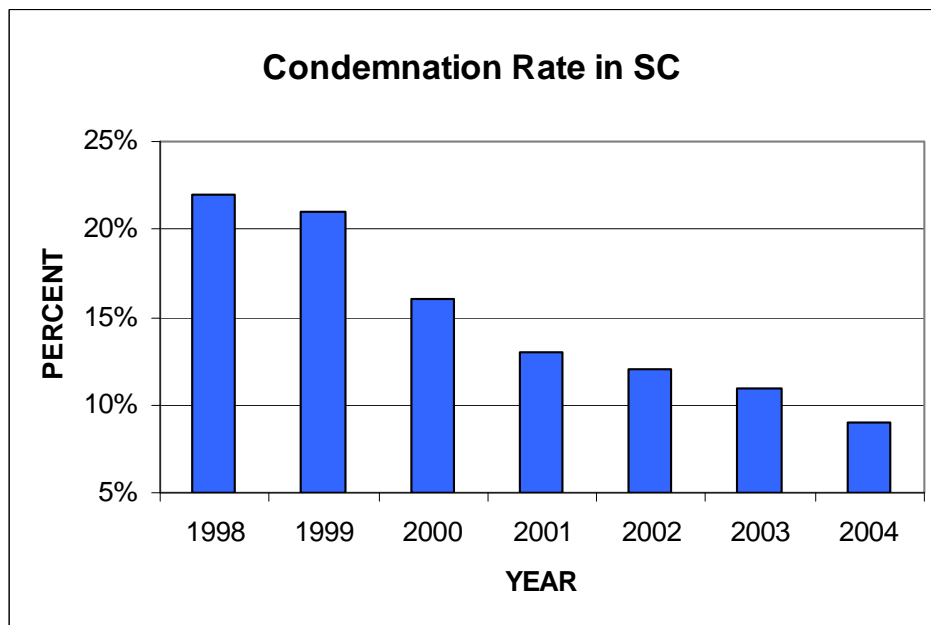
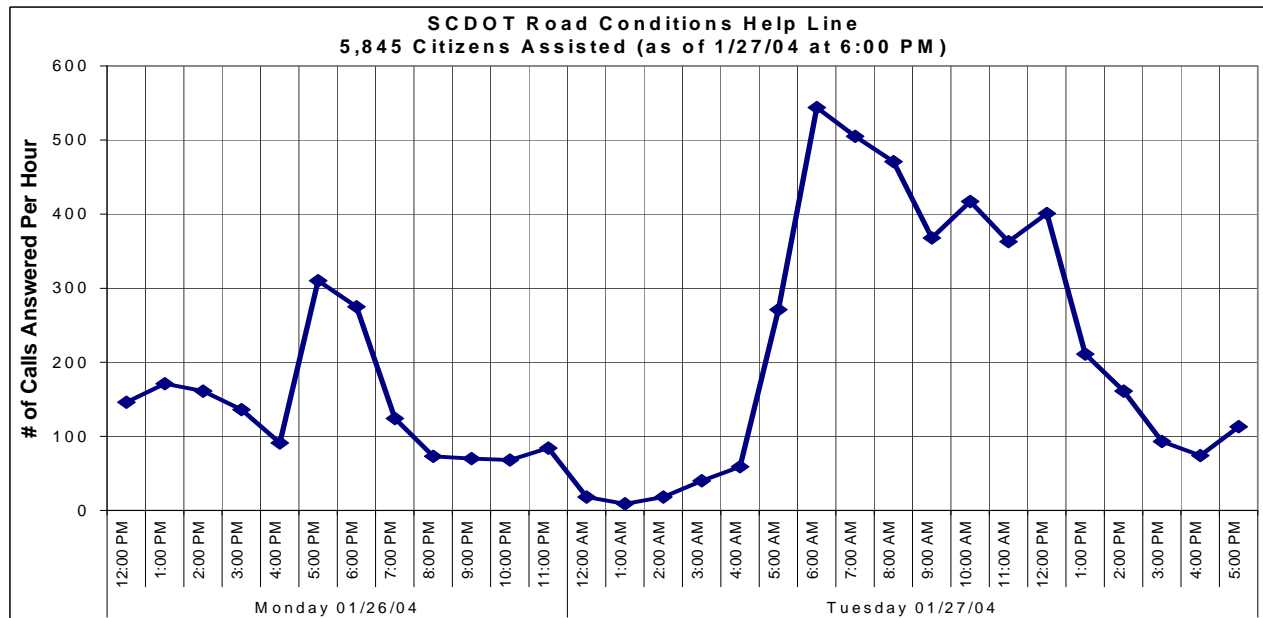


Figure 7.1b

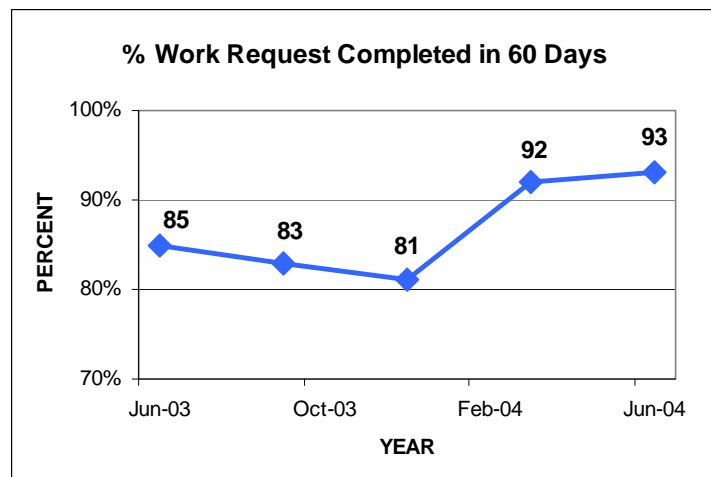
## Responses to the 2003 Winter Storm

At the beginning of the fiscal year, SCDOT personnel modified the Snow/Ice Road Conditions and Traffic Camera applications to improve the speed, efficiency, and reliability of access to this information. The agency also worked with the Division of the State CIO to implement a digital phone system in the help line. These efforts paid off when an ice and snowstorm struck a large portion of the state in January 2004. SCDOT's Internet site had nearly 90,000 visitors, most of which visited on Monday the 26<sup>th</sup>, with nearly 37,000 visitors. Volunteers from SCDOT, FHWA, and business partners manned the agency's toll-free Help Line to assist over 5,800 citizens with information about road conditions around the state. During the snowstorm in February 2004, volunteers on the Help Line assisted over 3,300 citizens. Below is the representation of the calls received by hour.



**Figure 7.1c**

The improvement of our customer service has been a major part of the business plan; therefore, SCDOT monitors its response to the citizen work request with a goal to complete all work requests within 60 days. SCDOT completed 92.9% of work requests within 60 days; this is below the goal of completing 95% within 60 days.



**Figure 7.1d**



Improving maintenance equipment utilization has been a priority in SCDOT's business plan. During FY 2003-2004, SCDOT has continued to reduce the number of maintenance equipment units and improve utilization. The number of units of equipment was reduced to 3,190 and the utilization improved to 83.5%.

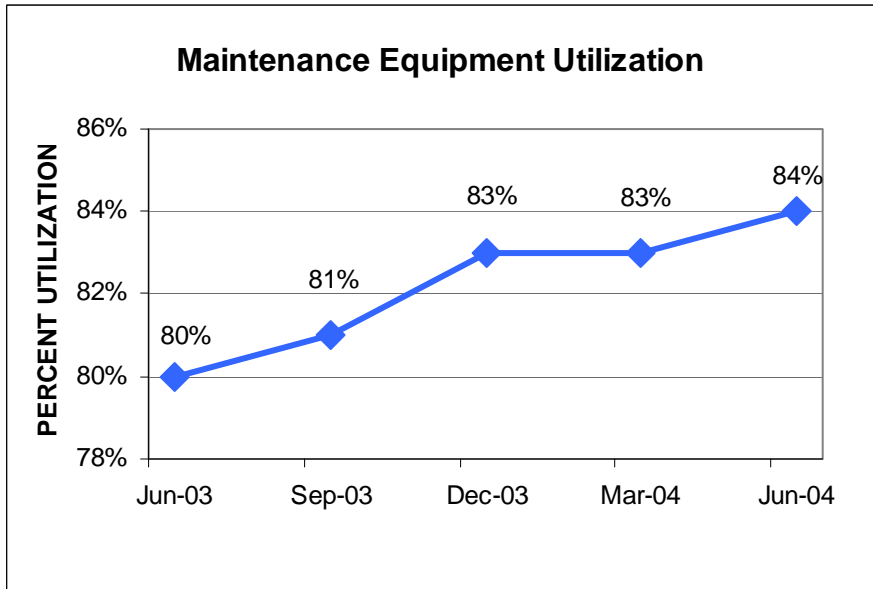
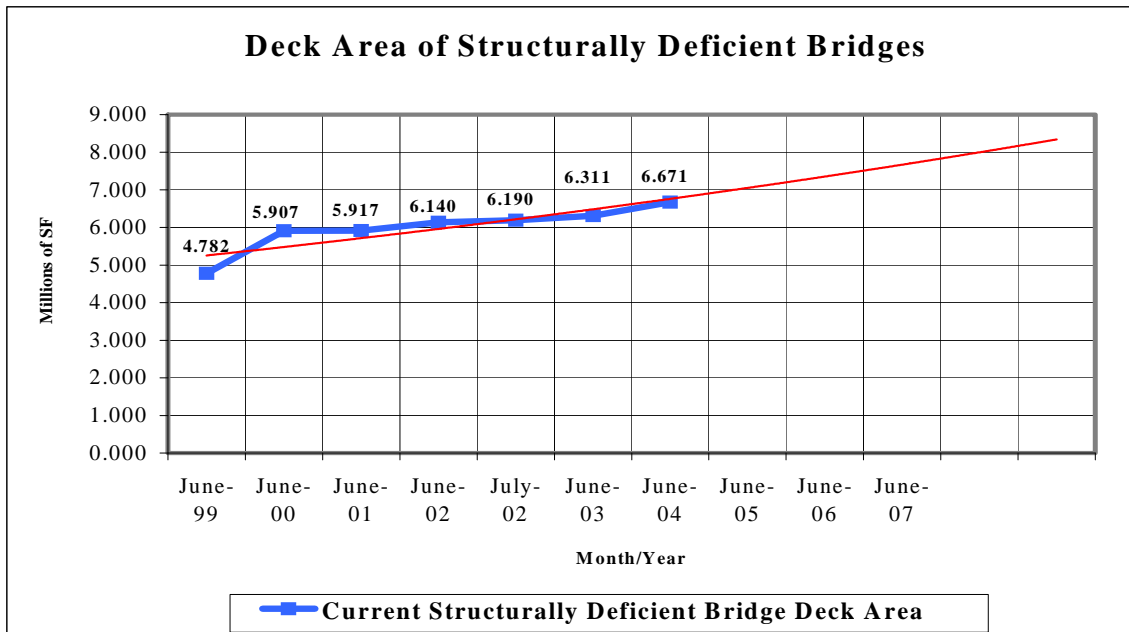


Figure 7.1e

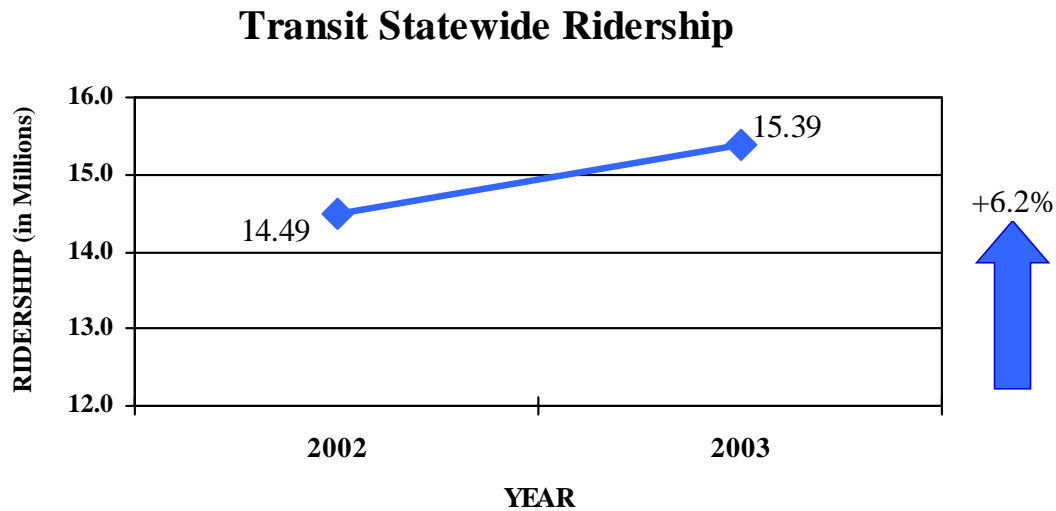
## 7.2 Performance Levels and Trends for Key Measures of Mission Accomplishment.

Below is a graph showing historical data with an associated trend line for the deck area of state-owned structurally deficient bridges. The trend line is based upon historical data and a current bridge funding level of about \$70 million per year. This level is far below that required to make significant improvements.



**Figure 7.2a**

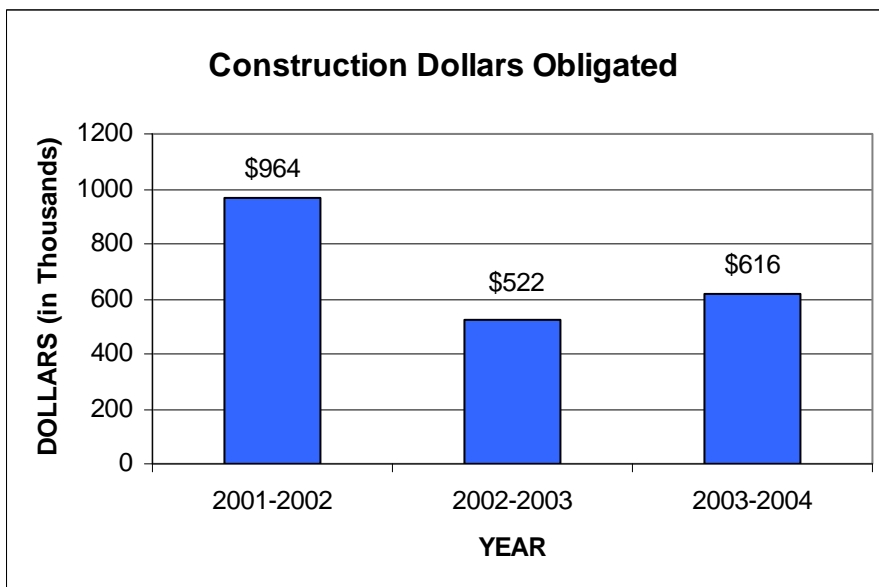
Below is a chart depicting Statewide Ridership. Ridership information is compiled annually and includes Public and Human Services. The 6.2% ridership increase may be attributed to the increasing fuel prices and the realization by commuters of the benefits in choosing transit rather than commuting to work using their private automobile.



**Figure 7.2b**

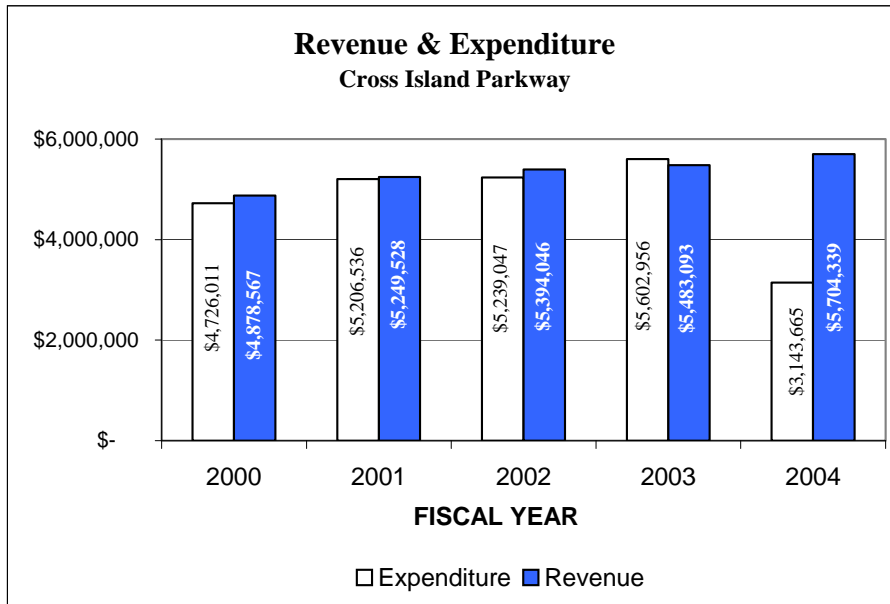
### 7.3 Key Measures of Financial Performance

The chart below depicts the federal-aid construction dollars obligated by fiscal year.



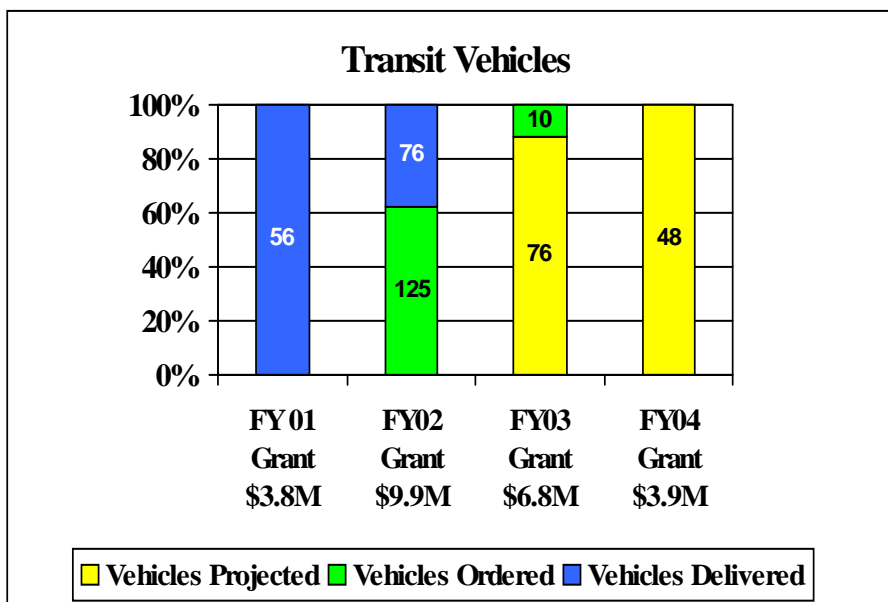
**Figure 7.3a**

The popularity of the Cross Island Parkway (CIP) in Hilton Head, South Carolina continues to grow with traffic increasing over 3% this fiscal year at over 8 million vehicles passing through the facility. Revenues from toll operations totaled in excess of \$5.7 million in FY 2003-2004. Due to refinancing of project bonds last fiscal year, CIP revenues exceeded expenses by nearly \$2.6 million. By utilizing other state agency resources, the TOC will be able to collect supplemental revenues from out-of-state violation collection in the upcoming fiscal year. Additionally, the automation of interoperability/reciprocity with the Southern Connector will streamline revenue exchange between the state's 2 toll facilities.



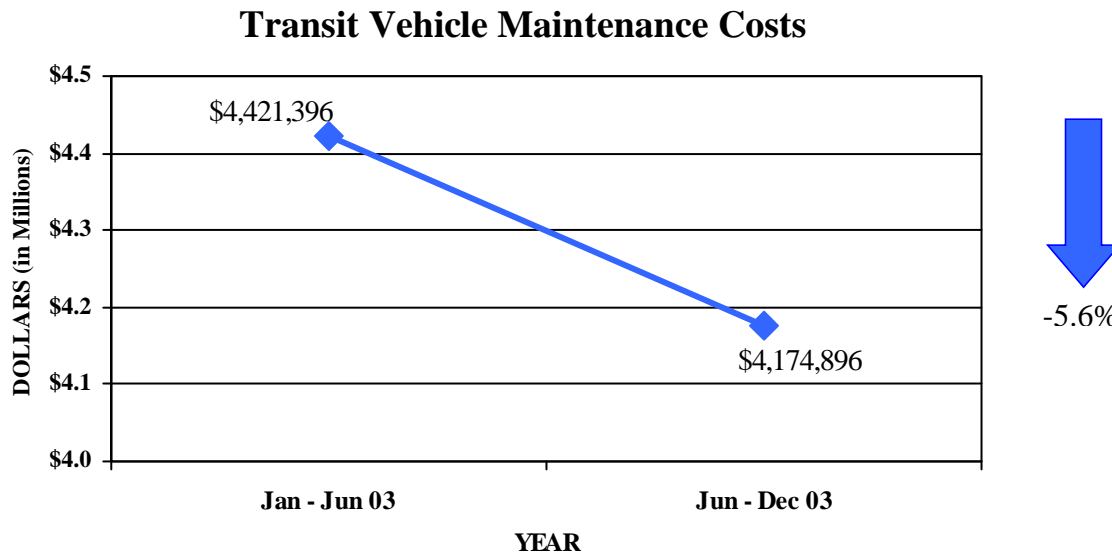
**Figure 7.3b**

In January 2004, SCDOT placed orders for at least 30 large transit buses to begin drawing down the FY 2002-2003 Congressional earmarks. By state fiscal year 2006, SCDOT is projected to spend over \$23 million on new vehicles. This is displayed below.



**Figure 7.3c**

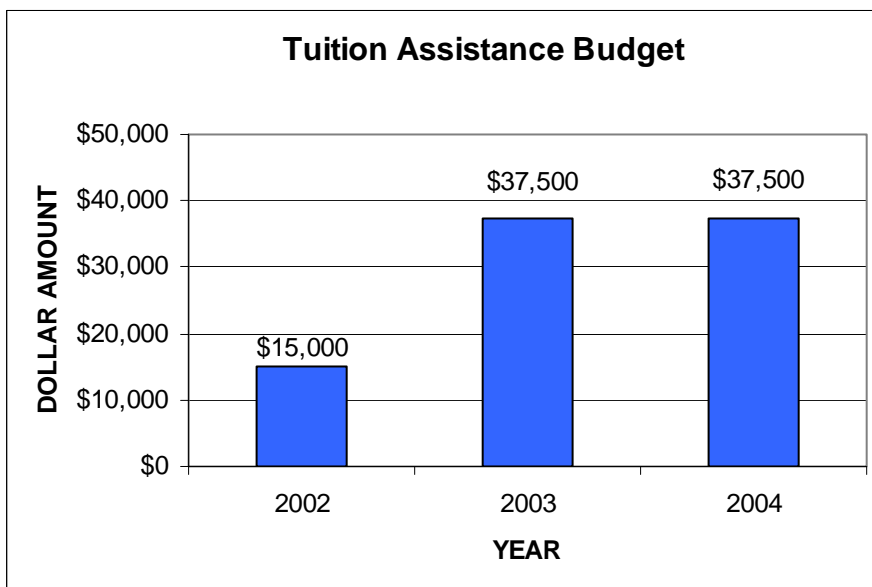
The goal of the Transit Vehicle Acquisition Program is to purchase new vehicles for each transit agency, which will cast a positive image of transit, ensure reliability and reduce maintenance costs. Below is a decrease of 5.6% over 12 months.



**Figure 7.3d**

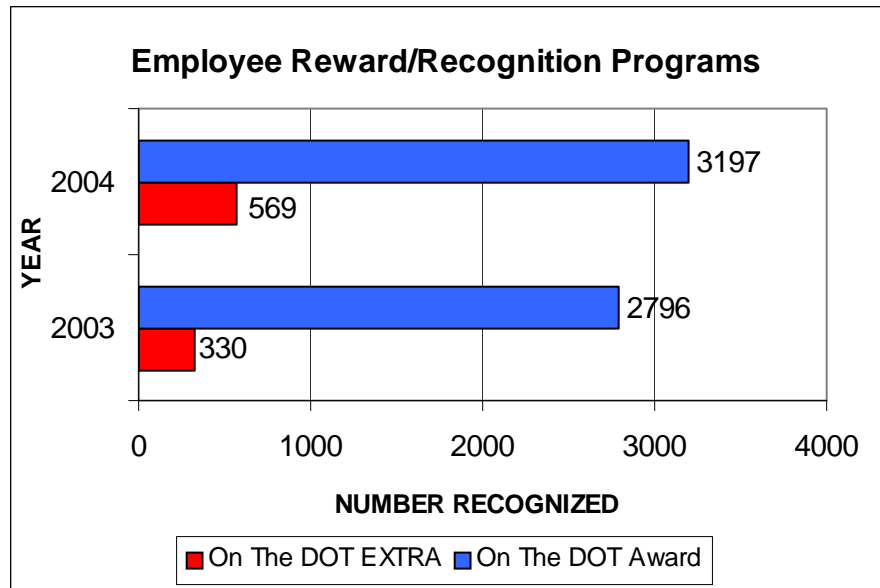
#### 7.4 Key Measures of Human Resources

Chart 7.4a reflects the amount of tuition assistance expended for SCDOT employees to further their formal education. Due to the interest in the program, SCDOT increased the budget for 2003; due to budget constraints, this year the funding remained consistent with the previous year.



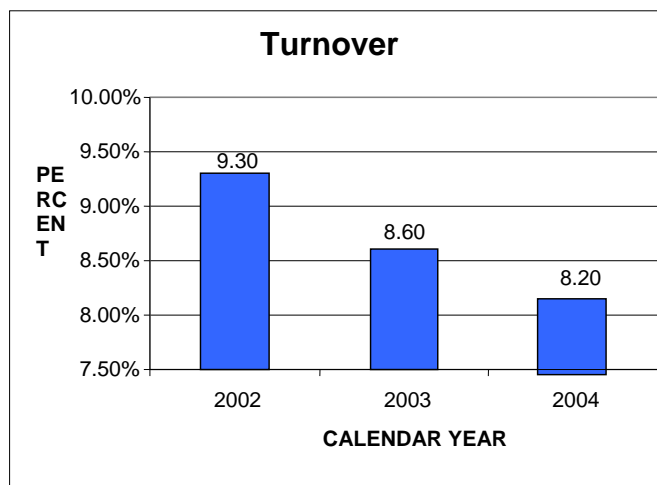
**Figure 7.4a**

SCDOT has several award and recognition programs; 2 of which are the On-The-DOT Award and the On-The-DOT EXTRA. Figure 7.4b represents those that were awarded.



**Figure 7.4b**

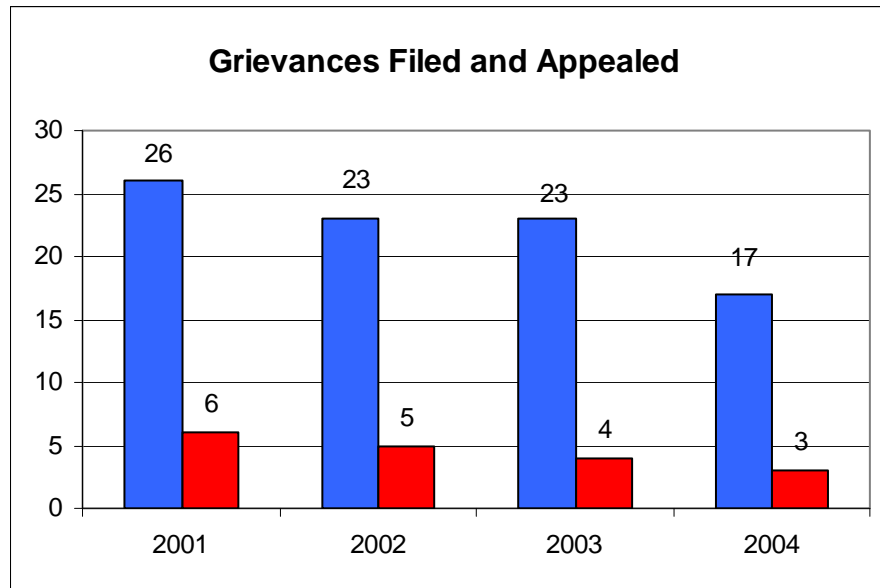
The figure below provides information of trend data for employee turnover.



**Figure 7.4c**



Figure 7.4d charts the number of grievances filed and appealed during the last four years. There has been a reduction in grievances and appeals in 2003-2004 that can possibly be attributed to increased training in both the EEO and in the Prevention of Sexual Harassment.



**Figure 7.4d**

OSHA incident rates have decreased consistently for the last 3 years and represent a 14.5% decrease since 2000. Figure 7.4e below shows the recordable cases per 200,000 hours worked.

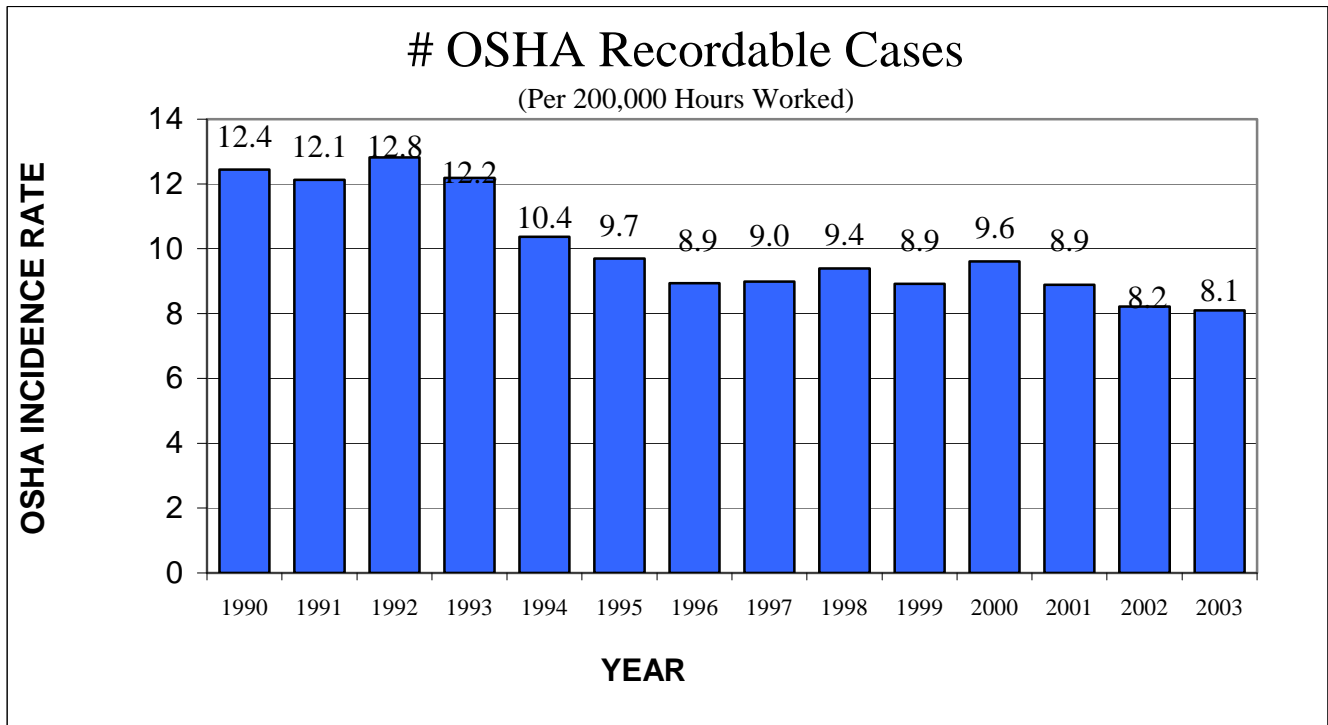


Figure 7.4e

#### 7.5 Key Measures of Regulatory/Legal Compliance and Community Support

- Out of a total of \$281,060 expended on mass transit technical assistance projects last fiscal year, approximately \$63,008 was spent with DBE firms on transit for a participation rate of 22%.
- SCDOT's updated (FY 2004-2005) goal and methodology for the DBE mass transit program set its participation goal at 3%. It was submitted to the FTA on July 26, 2004.
- For the second year in a row, SCDOT exceeded its strategic goal of increasing the number of certified DBEs in highways and mass transit by 13.6% in twelve months (ending June 2004). This is evidenced in the chart below (Figure 7.5a).

+13.6%



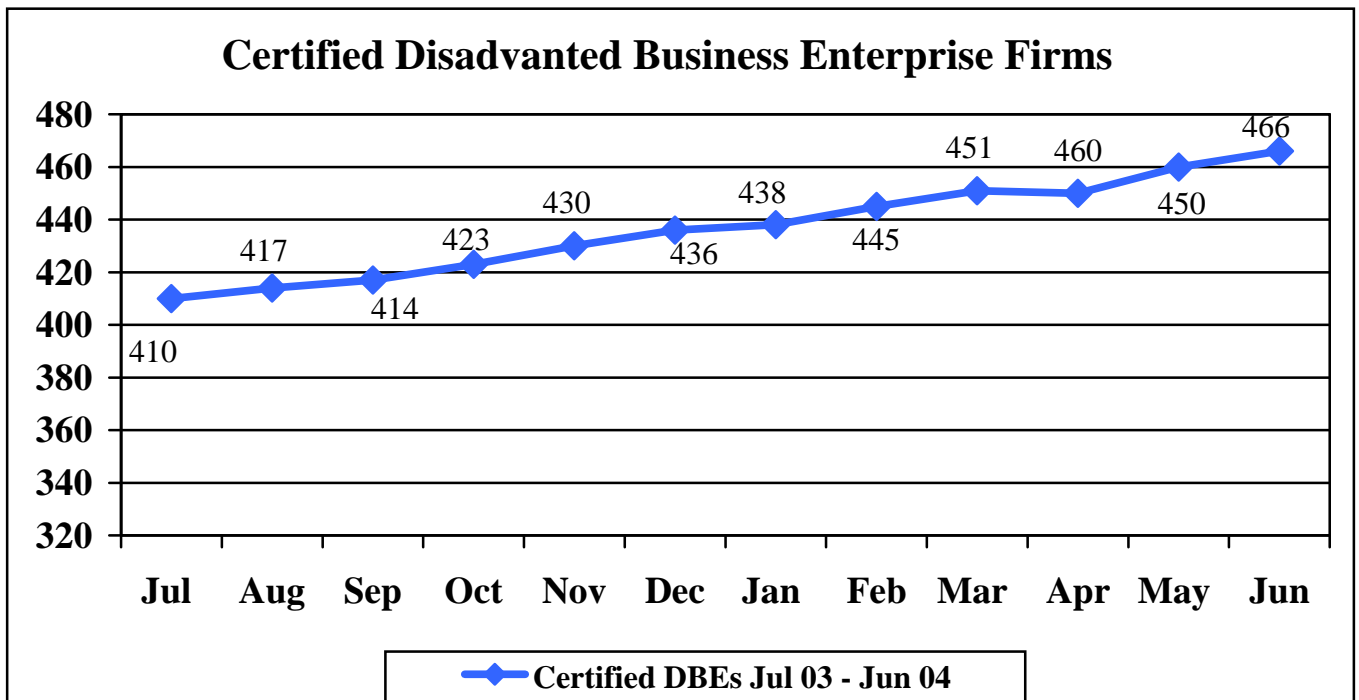


Figure 7.5a

Questions 7.2, 7.3, and 7.5 of the Malcolm Baldrige Quality Award Criteria

## **Appendix 1 to the 2003-2004 Annual Accountability Report**

SCDOT's Strategic Plan contains the agency's goals, objectives, and performance measures. Progress is measured by the review of data submitted by the Process Owner. The Executive Director reviews "dashboard indicators" essential for her to make informed timely decisions. This data is provided monthly by the Process Owners. Quarterly Reports are submitted by the Process Owners on each objective and the data is analyzed during In-Progress Reviews.

### **STRATEGIC PLAN UPDATE 2002-2003**

#### **GOAL 1--Increase safety and security on South Carolina's transportation systems and within SCDOT.**

**1. Reduce the number of highway crashes, injuries, and fatalities in South Carolina by 5% by 2005 through the development and implementation of a variety of statewide safety initiatives.**

Completion date: 12-31-2005

Performance Measure: Annual number of fatalities

**2. Reduce the number of lost workdays involving SCDOT employees due to occupational accidents by 5% by 2003 through the continued implementation and expansion of various employee safety programs and the establishment of a SCDOT Safety Committee.**

Completion Date: 12-31-2003

Performance Measure: Annual number of lost workdays

**3. Reduce work zone-related crashes, injuries, and fatalities by 10% by 2005 through the development and implementation of a comprehensive work zone safety program.**

Completion Date: 12-31-2005

Performance Measure: Annual number of work zone fatalities

**4. Reduce speed-related crashes, injuries, and fatalities by 5% by 2005 through the continued implementation and expansion of a comprehensive speed management program.**

Completion Date: 12-31-2005

Performance Measure: Annual number of speed-related fatalities

**5. Begin implementation of the Corridor Safety initiative in at least two districts.**

Completed Date: 6-30-2003

Performance Measure: Number of Corridor Safety initiatives underway

**6. Begin implementation of a program to reduce traffic crashes where hydroplaning is a significant factor.**

Completion Date: 12-31-2002

Performance Measure: Number of hydroplaning crashes



**7. Reduce the number of run-off-the-road crashes, injuries and fatalities statewide by 5% by 2005 through the implementation of the AASHTO Run-Off-Road demonstration project, the Safety on Secondary Roads District project, and the Hazard Elimination Program.**

Completion Date: 12-31-2005

Performance Measure: Annual number of run-off-road fatalities

**8. Reduce the number of pedestrian and bicycle crashes, injuries and fatalities by 5% by 2005 in the five counties with the highest frequencies of such incidents through the implementation of pedestrian assessments and supporting programs.**

Completion Date: 07-01-2005

Performance Measure: Annual number of pedestrian and bicycle fatalities

**9. Develop the capability to conduct crash analysis on any road in the state in a timely manner.**

Completion date: 06-30-2004

Performance Measure: Completion of milestones

**10. Conduct vulnerability assessment of South Carolina's Transportation Infrastructure designed to prevent terrorist acts and to identify appropriate countermeasures.**

Completion date: 12-31-2002

Performance Measure: Assessment complete

**11. Complete the installation of interstate median barriers on the highway.**

Completion Date: (A) 07-31-2002; (B) 07-31-2003

Performance Measure: A) Phase I: Number of hits/installed miles

B) Phase II: Number of hits/installed miles

**12. Implement a low cost interchange improvement program.**

Completion date: 01-01-2004

Performance Measure: Percent of projects complete

**13. Develop and implement a plan to widen shoulders on three miles of secondary roads in each county.**

Completion date: 6-30-2003

Performance Measure: Miles completed

**14. Develop a Risk Management Training/Awareness Course and provide training to Districts and applicable Headquarters personnel.**

Beginning Date: 06-30-2003

Performance Measure: Number of persons trained

**15. Develop an Intranet based program for Risk Management Data Collection and Analysis.**

Completion Date: 06-30-2003

Performance Measure: Program implemented

**16. Analyze the top 50 claims paid by SCDOT, prioritize into categories of claim type, and provide countermeasures to reduce the top three categories.**



Completion Date: 06-30-2003

Performance Measure: Countermeasures report submitted

**17. Develop and implement a “Return to Work” Program for injured SCDOT employees.**

Completion Date: 06-30-2003

Performance Measure: Implementation of program

**GOAL 2--Improve the quality, efficiency, and appearance of the State Highway System.**

**1. Complete the construction of all bonded and non-bonded Interstate interchange improvement projects.**

Completion date: 07-01-2005

Performance Measure: A) Number of bonded Interchange projects completed

B) Number of non- bonded Interchange projects completed

**2. Expand the Pavement Management system to cover all paved roads in the State System.**

Completion date: 06-30-2003

Performance Measure: Percent of state roads added to the pavement management system

**3. Implement the new modules of the Maintenance Management System statewide.**

Completion date: 06-30-2003

Performance Measure: Percent complete

**4. Maintain paint system on statewide bridge system.**

Completion Date: 06-30-2003

Performance Measure: A) Reduce percentage of tons of steel needing painting

B) Tons of steel painted

**5. Develop and implement a plan to decrease the number of deficient bridges in the state.**

Completion date: 06-30-2003

Performance Measure: Reduce percentage of square footage of bridge decks that are deficient

**6. Carolina Bays Parkway design-build project to be completed.**

Completion date: A) 10-01-2002 B) 01-31-2004

Performance Measure: Phase I: project accepted by SCDOT

Phase II: project accepted by SCDOT

**7. SC 170 design-build project to be completed.**

Completion date: 05-01-2005

Performance Measure: Project accepted by SCDOT

**8. Cooper River Bridges design build project to be completed.**

Completion date: 06-30-2006

Performance Measure: Project accepted by SCDOT



**9. Bobby Jones Expressway (Phase 1) to be completed.**

Completion date: 06-30-2004

Performance Measure: Project accepted by SCDOT

**10. I-95 widening near Florence to be completed.**

Completion date: 08-31-2004

Performance Measure: Project accepted by SCDOT

**11. Ashley Phosphate Interchange upgrade to be completed.**

Completion date: 07-30-2005

Performance Measure: Project accepted by SCDOT

**12. Implement the SIB projects according to the schedules and budgets in the intergovernmental agreements and STIP.**

Completion date: 06-01-2008

Performance Measure: A) Percent of projects on or ahead of schedule  
B) Percent of projects on or below budget

**13. Implement the MPO projects according to the schedules and budgets in each of the bonding agreements and STIP.**

Completion date: 06-01-2006

Performance Measure: A) Percent of projects on or ahead of schedule  
B) Percent of projects on or below budget

**14. Implement the COG projects according to the schedules and budgets in each of the bonding agreements and STIP.**

Completion date: 06-01-2008

Performance Measure: A) Percent of projects on or ahead of schedule  
B) Percent of projects on or below budget

**15. Implement System and Intermodal Connectivity projects according to the schedules and budgets in STIP.**

Completion date: 06-01-2011

Performance Measure: A) Percent of projects on or ahead of schedule  
B) Percent of projects on or below budget

**16. Let to contract 2 Interstate Gateways as part of SCDOT's 5-Year Beautification Vision.**

Completion Date: 06-30-2003

Performance Measure: Sites let to contract

**17. Develop a Long-Range Plan for the Intelligent Transportation System.**

Completion date: 09-30-2002

Performance Measure: Plan approved and adopted by SCDOT

**18. Improve scores of the Quality Management Team reviews of construction project sites and project records to ensure conformity with plans and specifications.**



Completion date: 06-30-2003

Performance Measure: Average quality index of reviews increase by 10%

**19. Complete second year of a six-year program to maintain all rural roads with less than 500 ADT with a chip seal treatment.**

Completion date: 06-30-2003

Performance Measure: Percent of miles resurfaced with chip seal as compared with miles yet to seal

**20. Complete second year of a five-year program to inspect all the shoulders and ditches for deficiencies that require maintenance.**

Completion date: 06-30-2003

Performance Measure: Number of miles of ditches inspected

**21. Reduce the time required to receive individual environmental permits by 30%.**

Completion date: 10-01-2004

Performance Measure: Average time to obtain 404/401/OCRM permits

**22. Ensure all MPOs, designated as non-attainment areas, develop transportation plans and programs to conform to Clean Air Act requirements.**

Completion date: 06-30-2004

Performance Measure: Approved Air Quality Plans

**23. Ensure that all MPO's have a current certified Long Range Transportation Plan.**

Completion date: 06-30-2003

Performance Measure: Plans accepted by FHWA

**24. Complete second year of a traffic signal maintenance program, which includes annual inspections and the replacement and upgrade of equipment on a twelve-year cycle.**

Completion date: 06-30-2003

Performance Measure: A) Annual inspections

B) Number of traffic signals upgraded as compared the number to be upgraded

**25. Perform quarterly reviews on all projects with NPDES Permits.**

Completion date: 07-01-2003

Performance Measure: Perform quarterly reviews with no violations cited by Environmental Agencies.

**26. Complete 50% of a statewide sign inventory to include the placement of barcodes on all signs.**

Completion Date: 6-30-2003

Performance Measure: Percentage of signs inventoried

**27. Develop and implement a Maintenance Quality Review Team to conduct appraisals of all maintenance units.**

Completion date: 06-30-2003

Performance measure: Number of appraisals conducted

**28. Develop detour plans for potential interstate closures at any interchange location.**





Completion date: 6-30-2004

Performance Measure: Percent of plans complete

**29. Implement a common filing system statewide for all maintenance units and District Office maintenance files.**

Completion date: 12-31-2002

Performance measure: Percent of units using new system

**30. Complete feasibility study for new I-73 corridor from the North Carolina state line to the South Carolina Coastal area. .**

Completion date: 01-01-2003

Performance measure: Corridor analysis available to begin preliminary engineering.

**31. Provide the Preconstruction office with advance Project Planning Reports for all system upgrades.**

Completion date: 10-01-2003

Performance measure: Reports accepted and approved by affected MPO/COG prior to the obligation of design funds.

**GOAL 3--Improve and expand the multi-modal Transportation System in South Carolina.**

**1. Develop and pursue the implementation of legislation for a statewide coordination plan.**

Completion date: 06-30-2003

Performance Measure: Plan approved by SCDOT and state agencies.

**2. Support efforts to increase mass transit ridership statewide by 3.0%.**

Completion date: 12-31-2003

Performance Measure: (A) Number of meetings and planning actions carried out jointly with transit providers to increase ridership.

(B) Percentage change in ridership at end of FY 2002-2003

**3. Implement an ongoing improvement program for transit vehicles.**

Completion date: 12-31-2003

Performance Measure: Dollar savings in maintenance costs

**4. Initiate statewide assessment and improvement plan for mass transit facilities.**

Completion Date: 06-60-2003

Performance Measure: The development of a statewide plan/document.

**5. Increase transit technology statewide.**

Completion date: 05-31-2003

Performance Measure: Number of new applications available for use by transit agencies

**6. Increase the number of certified DBEs in highways and mass transit by 10%.**

Completion date: 05-31-2003

Performance Measure: Number of certified DBE's



**7. Meet or exceed the goals set for the DBE Program in highways.**

Completion date: 09-30-2003

Performance Measure: Dollars committed

**8. Develop a long-range, intermodal plan for South Carolina.**

Completion Date: 12-31-2002

Performance Measures: Plan approved by SCDOT Commission

**9. Develop a 27-in-7 Post Program.**

Completion date: Annual updates

Performance measure: Milestones accomplished

**GOAL 4--Enhance and implement integrated financial and project management systems.**

**1. Develop and generate timely, meaningful financial reports for management.**

Completion date: 12-31-2002

Performance Measure: Number of reports accepted by management and placed into production

**2. Develop an on-line browser in the General Ledger System.**

Completion Date: 12-31-2002

Performance Measure: Number of browsers placed on-line

**3. Pay all invoices within vendor/contractor terms.**

Completion date: 09-30-2002

Performance measure: Average number of days to pay invoices each month

**4. Use Electronic Fund Transfer (EFT) for contractors who requests payments electronically.**

Completion date: A) 12-31-2002 and B) 06-30-2003

Performance Measure: A) EFT used for 50% of contract payments

B) EFT used for 100% of contract payments

**5. Pay 95% of construction estimates within 90 days of final acceptance.**

Completion date: 12-31-2002

Performance Measure: Percent invoices paid in 90 days

**6. Close 95% of projects within 90 days of payment of final construction estimates.**

Completion date: 3-31-2003

Performance Measure: Percent of projects closed in 90 days

**7. Implement and track the SCDOT Construction Resource Manager Planning and Reporting System to track schedules and financial requirements.**

Completion date: 09-30-2002

Performance Measure: System fully operational

**8. Develop (Phase I) Integrated Transportation Management System (ITMS) to support current and long-term data integration, reporting, and analysis.**

(A) Implement new Road Inventory Management System (RIMS)

Completion Date: 09-60-2003

Performance measure: Successful implementation of an online browse/update Road Information Management System with Photo Log, GIS, and complex query capabilities

(B) Digitize all county maps for GIS interface

Completion Date: 12-31-2003

Performance Measure: County maps are digitized

(C) Develop system architecture and begin phased implementation

Completion Date: 07-01-2003

Performance Measure: Pavement and Bridge modules implemented

**9. Begin analysis of output data from AASHTO software programs.**

Completion Date: 07-01-2003

Performance Measure: Analysis of information in BAMS/DSS for collusion, unbalanced bidding, bid rigging, etc.

**10. Prepare in-house year-end financial statements in conformity with universal Generally Accepted Accounting Principles.**

Completion date: 06-30-2003

Performance measure: Complete financial reports

**11. Develop a methodology to provide special pay information to employees.**

Completion date: 12-31-2003

Performance measure: Provide special pay notices with payroll/check stubs

**12. Develop a long-range plan for migration to an enterprise Financial/Accounting system compatible and completely interactive with developing a statewide system.**

Completion date: 03-31-2003

Performance measure: Completion of plan.

**GOAL 5--Improve employee skills, their work environment and provide opportunities.**

**1. Maintain donations to the Employee Leave Pool.**

Completion date: On going

Performance Measure: Number of donations to exceed number of requests.

**2. Recruit and attract quality employees and ensure a diverse workforce.**

Completion date: 12-31-2003

Performance Measure: Achieve at least 90% of availability for minorities and women at all levels of our work force.

**3. Establish a Human Resources Web Page.**

Completion date: 6-30-2003

Performance Measure: Follow-up evaluation to measure helpfulness.



**4. Provide HR Skills Training to Supervisors and Managers.**

Completion date: 12-31-2004

Performance Measure: Number trained. Follow up evaluation confirms that skills are being used

**5. Provide sexual harassment/workplace violence training to all employees.**

Completion date: 12-31-2003

Performance Measure: Reduction in the number of incidents

**6. Provide leadership development training to managers and supervisors.**

Completion date: 12-31-2004

Performance Measure: Number trained. Follow up evaluation confirms that learned skills are being used

**7. Develop and deploy a workforce development planning process.**

Completion date: 12-31-2004

Performance Measure: Phase I- establish career ladders for Trades Specialist series

**8. Update Environmental Training Course.**

Completion date: 06-30-2003

Performance Measure: Employees trained

**GOAL 6--Improve management of our property, equipment, and technology.**

**1. Upgrade PC's and install Windows 2000.**

Completion Date: 06-30-2004

Performance Measure: A) Percent of computers with new systems

B) Replace 1/3 of computers yearly if budget permits

**2. Develop and adopt a Phase I and Phase II comprehensive Total Asset Management Program.**

Completion date: Draft plan 07-30-2002 Final plan 12-31-2002

Performance Measure: Plan accepted by Comptroller General and SCDOT

**3. Update Capital Improvement Plan to Include Year 2008.**

Completion date: 06-30-2003

Performance Measure: Plan approved by SCDOT Executive Committee

**4. Develop and Implement a Correspondence Tracking System, (Phase I) of an Electronic Document Management System.**

Completion date: 02-01-2003

Performance Measure: EDMS system in place

**5. Review all facilities including rest areas, semi-annually to ensure each facility is physically and environmentally clean. Districts will provide report to the Director of Maintenance by the end of March and September of each year.**

Completion date: 6-30-2003

Performance Measure: Inspections completed



**6. 85% of all maintenance equipment listed on the present utilization chart will meet minimum usage standards. (FEDA)**

Completion date: 06-30-2003

Performance Measure: Percent of equipment meeting minimum usage standards

**7. Perform comprehensive environmental audit at one maintenance facility in each district.**

Completion date: 6-30-2003

Performance measure: Number of audits completed.

**8. Develop a deployment strategy for implementation of the Malcolm Baldrige performance management system.**

Completion date: 06-30-2003

Performance measure: Completion of milestones

**9. Create an environmental database to track all pertinent information for our facilities.**

Completion date: 6-30-2003

Performance measure: Completion of milestones

**10. Develop a tracking system to log all materials entering SCDOT facilities.**

Completion date: 12-31-2002

Performance measure: Completion of milestones

**11. Identify all surplus land and buildings and develop a marketing strategy to dispose of property not needed by the Department.**

Completion date: 12-31-2002

Performance measure: Number of parcels identified and sold

**GOAL 7--Provide highest level of customer service.**

**1. Participate in the annual statewide customer service survey in coordination with the University of South Carolina Institute for Public Affairs.**

Completion date: Survey 12-31-2002 and Survey results by 06-30-2003

Performance Measure: A) Final report received

B) Number of initiatives resulting from report

**2. Measure customer input in project and program activities and in business plans.**

Completion date: 12-31-2002

Performance Measure: Customer satisfaction measurements included in annual business plan

**3. Improve customer service & responsiveness of oversize/overweight permit process.**

Completion date: 6-30-2003

Performance Measure: New system operational

**4. Report to public on success of the 27-in-7 program and the impact on SC.**

Completion Date: 12-31-2003



Performance Measure: Begin semi-annual reports in the July & December issues of the “*Connector*” and updates on SCDOT’s web site

**5. 95% of all requests and complaints received by the maintenance units will be completed within sixty calendar days.**

Completion date: 06-30-2003

Performance Measure: Percent of requests/complaints completed

**6. Reduce delays due to incidents on urban freeways through the expansion of SHEP, and ITS, and increased interagency coordination on Incident Management.**

Completion Date: 12-31-2003

Performance Measures: A) Number of hours of SHEP operation, miles covered, & responses

B) Number of miles under video surveillance

C) Number of Incident Management Teams Established

**7. Reduce condemnation rate by 1% annually.**

Completion date: 06-30-2003

Performance Measure: Annual condemnation rate

## Appendix 2 to the 2003-2004 Annual Accountability Report

### Major Program Areas

Program Number and Title	Major Program Area Purpose (Brief)	FY 02-03 Budget Expenditures	FY 03-04 Budget Expenditures	Key Cross References for Financial Results*
05010000 - General Administration	General Administration is the agency-wide executive management and support service function.	State: Federal: Other: 34,620,828.51 Total: 34,620,828.51 % of Total Budget: 4%	State: Federal: Other: 31,797,508.83 Total: 31,797,508.83 % of Total Budget: 3%	Figure ES-1 Page 1
20010000 - Engineering Administration	This program funds the core management to support the delivery of the highway construction program.	State: Federal: Other: 71,710,089.83 Total: 71,710,089.83 % of Total Budget: 8%	State: Federal: Other: 73,381,483.22 Total: 73,381,483.22 % of Total Budget: 7%	Figure ES-1 Page 6 Figure 7.3a
20030000 - Engineering Construction	This program is the construction of roads, bridges, and rest areas.	State: Federal: Other: 396,918,382.22 Total: 396,918,382.22 % of Total Budget: 42%	State: Federal: Other: 640,446,870.35 Total: 640,446,870.35 % of Total Budget: 63%	Figure ES-1 Page 6
20050000 - Highway Maintenance	This program maintains 41,496 road miles, 8,377 bridges, 539 buildings, 24 rest areas, and 10 welcome centers.	State: Federal: Other: 166,016,320.54 Total: 166,016,320.54 % of Total Budget: 18%	State: Federal: Other: 199,220,692.75 Total: 199,220,692.75 % of Total Budget: 19%	Figure ES-1 Page 6 Figure 7.3a
99000000 - Capital Projects	Permanent Improvements financed by bonds. Bonds are used to construct roads, bridges, and rest areas	State: Federal: Other: 202,484,710.17 Total: 202,484,710.17 % of Total Budget: 21%	State: Federal: Other: Total: 0.00 % of Total Budget: 0%	Figure ES-2 Page 7 Figure ES-3 Page

**Below: List any programs not included above and show the remainder of expenditures by source of funds.**

05050000 - Land and Buildings, 30000000 - Toll Operations, 95050000 - State Employer's Contributions, 40000000 - Mass Transit

<b>Remainder of Expenditures:</b>	State: Federal: Other: 75,431,041.32 Total: 75,431,041.32 % of Total Budget: 8%	State: Federal: Other: 77,419,354.29 Total: 77,419,354.29 % of Total Budget: 8%
-----------------------------------	---	---

\* Key Cross-References are a link to the Category 7 - Business Results. These References provide a Chart number that is included in the 7th section of this document.

## Appendix 3 to the 2003-2004 Annual Accountability Report

### Strategic Planning

Program Number and Title	Supported Agency Strategic Planning Goal/Objective	Related FY 03-04 Key Agency Action Plan/Initiative(s)	Key Cross References for Performance Measures*
	Increase Safety and Maintenance on South Carolina's transportation system and within the agency.	Road and Bridge Maintenance Truck Lane Restrictions Crisos, Rush, Median Barriers	Figure 7.2a Goal 1 Objective 1 Goal 1 Objective 1
	Excel in Customer Service internally and externally.	Sale of Surplus Property Transportation Equipment Replacement Model (Terms)	Goal 6 Objective 11 Goal 6 Objective 6 Figure 7.3d
	Use Resources wisely and efficiently.	SCDOT University, STTAR, STEP 21, and EDP Programs	Goal 5 Objective 4-5 Pages 24 & 25
	Improve employee development for all employees.	Incident Response Teams Reduction of the Condemnation Rate Road Condition Help Line	7.1a - Goal 7 objective 6 7.1b - Goal 7 Objective 7 7.1c Goal 7 Objective 6

\* Key Cross-References are a link to the Category 7 - Business Results. These References provide a Chart number that is included in the 7th section of this document.



## Glossary

AASHTO	American Society for State Highway and Transportation Officials
BMS	Bridge Management System
CIP	Cross Island Parkway
Condemnation rate	The number of land acquisitions where property is acquired for public purposes through legal proceedings under the power of eminent domain.
COG	Councils of Government
CRM	Construction Resource Managers
DBE	Disadvantaged Business Enterprise
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
ITS	Intelligent Transportation System
MPO	Metropolitan Planning Organizations
OSHA	Occupational Health and Safety Administration
QA/QC	Quality Assurance/Quality Control
Rutting	A sunken groove or track made by the passage of vehicles.
RUSH	Ramp Upgrades for Safer Highways
RTA	Rural Transportation Authority
SCDOT	South Carolina Department of Transportation
SCDPS	South Carolina Department of Public Safety
SCIRF	South Carolina Insurance Reserve Fund
STEP 21	Strategic Training and Education Program for the 21 <sup>st</sup> Century.
STTAR	Strategic Training for Transportation Agency Representatives
TRB	Transportation Resource Board