SCDOT

SMARTRIDE project

PROJECT REPORT

South Carolina Department of Transportation

Mass Transit Office

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Executive Summary

SmartRide is the name given to the four-week research project conducted by the South Carolina Department of Transportation (SCDOT) to transport workers from surrounding communities into the downtown Columbia, South Carolina area. The SmartRide Research Project came about as a result of staff efforts to examine the feasibility of establishing a transit service designed specifically for working commuters. From October 6, 2003 through October 31, 2003; transit buses picked up commuters from eight designated parking areas in the mornings, and returned them to the same locations at the end of the day. Since the main goal of the project was to determine whether sufficient demand existed for commuter-focused transit service, there was no fare required to ride any of the SmartRide vehicles during the project period. SmartRide Project leaders, SCDOT managers, and SmartRide partners were encouraged by the consistent level of participation by commuting passengers and the community excitement that residents from around the State expressed about the Project.

The SmartRide Research Project required the cooperation and partnership of many offices, businesses and agencies in the region. The SmartRide Research Development Committee was comprised of primarily SCDOT staff, under the leadership of the Mass Transit Office. The Central Midlands Regional Transportation Authority (CMRTA) also had a representative on the Committee. Through an agreement, the CMRTA provided the transit service aspect of the Project. Other agencies and businesses provided meeting facilities, sections of their parking areas, and additional transit vehicles for the Project. The execution of the SmartRide Research Project could not have been possible without the participation of other entities that cooperated with the South Carolina Department of Transportation.

SCDOT was successful in gaining permission from various businesses, shopping centers, and agencies to allow a section of their automobile parking areas to be used by commuters participating in the SmartRide Research Project. Those areas also served as the passenger pick up locations for the Project. The pick up and parking areas were located at the following sites:

Newberry Plaza in Newberry

The Little Mountain Gazebo in Little Mountain

O'Cain Advertising in Chapin

The Department of Motor Vehicles Office near the Peak Exit off of I-26

The Harbison branch of the Midlands Technical College in Irmo

The Piggly Wiggly on Highway 6 in Lexington

The SCDOT Park-and-Ride facility in Lexington, and

The Days Inn off Highway 601 in Lugoff.

The downtown drop off points were limited to the state office buildings near Bull and Confederate Streets, Palmetto Richland Memorial Hospital, the CMRTA Transit Center at Laurel and Sumter Streets, and several stops near the State Capital Complex.

During the research period from October 6 through October 31, an early morning run was made with the intent of getting commuters in the downtown Columbia area by 7:30 AM. A second run followed one hour later for each of the pick up locations. The return trips to the parking areas in the afternoon followed a similar pattern during the 4:00 PM and 5:00 PM hours. Over the 20 days of operation, an average of 68 persons rode the SmartRide buses daily. A total of 2,730 passenger trips were provided over the entire research period. SmartRide services to the Newberry-Little Mountain-Chapin area registered the greatest level of activity, with 1,076 total passenger trips.

SmartRide Project participants were surveyed once a week regarding their opinions about the SmartRide services. The volunteers who helped on survey days as well as project participants and others submitted many comments and observations regarding the project and its potential. **The weekly surveys revealed that most of the SmartRide participants were college graduates who usually drive to work alone and had never used mass transit before on a regular basis.** The surveys also revealed that most of the Project participants thought that a reasonable fare for similar commuter service would be from $10.00 to $15.00 per week..

The cost for the four-week SmartRide Research Project was $53,098.62. This figure includes all promotional items, the operational cost to CMRTA, and the production cost of the final report. Total SCDOT staff time required carrying out all planning activities for the project, the operational period, and the report-writing period amounted to approximately 3,000 personnel hours.

The successful launching of an effective system of commuter-focused transit in the State would increase mobility options for some workers. The significant use of commuter-focused transit could also be employed as a tool to help alleviate traffic congestion and reduce the levels of harmful automobile emissions into the atmosphere. The SmartRide Research Project not only demonstrated demand for commuter-focused transit but also sparked an interest in broader uses of transit in South Carolina. As a result of the successful completion of the SmartRide Research Project, the following recommendations have been developed:

1. Make commuter transit issues a meaningful part of transportation development in the State by establishing and implementing transit factors to be considered at the pre-construction level of all projects.

2. Explore the feasibility of establishing a funding program from existing state funds to support commuter-focused transit activities. This proposed funding program could carry a common commuter transit identity, such as "SmartRide," to make it easily recognizable throughout the State.

3. Coordinate with community and regional level authorities for the launching of commuter-focused transit feasibility studies and pilot projects, like SmartRide, in conjunction with statewide commuter transit educational efforts.

4. Promote the "Commuter Choice" transit fare incentive program.

SECTION 1

Project Introduction and Concept

The SmartRide Research Project

SmartRide is the name given to the four-week transit research project conducted by the South Carolina Department of Transportation (SCDOT) during the month of October of 2003. The core activity of the project is a commuter-focused transit operation that was designed to meet the transportation needs of workers traveling into the Columbia South Carolina area. The SmartRide Research Project included features of a park-and-ride operation and an express bus transit system. The project made available to area residents, fare-free transportation services around the morning and afternoon peak commuter periods for the 20 business days of operation during the month of October 2003.

The SmartRide Research Project Development Committee

SCDOT Executive Director, Elizabeth Mabry, authorized the formation of a committee in May of 2003 to develop the framework of a park-and-ride style commuter service. This committee also was to establish any needed partnerships to carryout the objectives of the project and actually control the operational aspects of the service during a specified project period. The composition of this committee included the following individuals:

David Burgess, *SmartRide Project Manager and Project Development Committee Chairperson, SCDOT Mass Transit Office*

Beacham Brooker, *SCDOT Legal Office*

Rick Callaham, *SCDOT Right of Way Office*

Marion Carman, *Program Coordinator, SCDOT Mass Transit Office*

Tina Hembree, *SCDOT Community Relations Office*

John Gardner and Mark Pleasant, *SCDOT Planning Office*

Tom Johnson, *Supportive Services Manager, SCDOT Mass Transit Office*

Carol Jones, *Special Projects & Operations Engineer, SCDOT Traffic Engineering Office*

Bill McIlwain, *SCDOT Rail Manager*

Pete Poore, *Director of SCDOT Communications Office*

Oscar Rucker, *Director of SCDOT Right-of-Way Office*

Mitzi Teel-Javers, *Interim Executive Director, Central Midlands Regional Transportation Authority*

Terecia Wilson, *Director SCDOT Safety Office*

The SmartRide Development Committee included the work of the HOV Subcommittee, which was formed to examine the feasibility of employing some form of dedicated lanes for SmartRide buses during a portion of the project period. The composition of the HOV subcommittee is given below:

Chairperson: Carol Jones, *Traffic Engineering*

Brent Dillon, *Traffic Engineering*

John Gardner, *Planning Office*

David Morris, *FHWA, Advisory Member*

Dipak Patel, *Traffic Engineering*

Eddie Sawyer, *Traffic Engineering*

Beacham Brooker, *Legal, Advisory Member*

David Burgess, *Ad Hoc Member*

The SmartRide Project included several phases of development that led up to the conclusions and recommendations found in this Final Report.

SmartRide Research Project Development Phases
Concept Development Phase
Team Building Phase
Educational Outreach Phase
Marketing Phase
Project Operational Phase
Completion of Final Report
Post-Project Phase

Concept Development Phase: Early part of the project when the Project Development Committee was formed and the guiding framework for the project was established.

Team Building Partnership Development Phase: The SmartRide Research Project required the participation and collaboration of many entities due to special equipment needs, property utilization, and staff involvement. Members of the Development Committee made contact with over 30 downtown Columbia businesses, offices and agencies in an attempt to garner support for the project and build critical partnerships. SCDOT conducted a meeting on August 14, 2003 to present the SmartRide Research Project to potential partners in the Columbia Area. In the end, about 10 entities remained very active partners in carrying out the SmartRide Project.

Educational Outreach Phase: During the month of September, members from the SmartRide Development Committee conducted a series of information-sharing sessions at the work locations of supporting project partners. The format generally consisted of a PowerPoint presentation, the SmartRide Video presentation, and a question and answer period. These information-sharing sessions allowed the SmartRide team to make direct appeals to commuters about the project. The sessions also permitted potential participants to ask questions about the temporary transit operation.

Marketing Phase: A variety of efforts were carried out to promote the operational phase of the SmartRide Research Project. Several Public Service Announcements were prepared and released through the SCDOT Communications Office, both before and during the operational phase of the Project. The media were kept involved by providing cellular telephone contact numbers on specifics days on the SmartRide buses. A SmartRide website was launched, with a link through the SCDOT web site.

Project Operational Phase: The actual transit services were carried out during this period. For four weeks, SmartRide Project buses provided morning and afternoon transportation from the designated pickup locations into the downtown Columbia area.

Mid-Point Evaluation: After the second week of operation was completed with the SmartRide Project, SCDOT staff met with several transit providers that operate regular transit services in the areas affected by the SmartRide Project. The meeting had a dual purpose of providing a mid-point evaluation of the project and to gather impressions from RTA officials on the performance of the SmartRide Project. In addition, SCDOT staff wanted to find out what additional data or information would be needed to allow the transit providers to consider continuing any of the routes of the Project.

Completion of Final Report: The major ideas, partnerships, activities, performance demonstrations, and results from the SmartRide Project are to be compiled in an organized text.

Post Project Educational Outreach Phase: SCDOT's post-project involvement with commuter-focused transit operations and service will take on more of a facilitator role. SCDOT staff may be available to assist in carry out similar projects in other communities.

SmartRide Research Questions

1. Will individuals who have functioning automobiles, park their vehicles to take an alternate method of transportation to the downtown work area?

2. Is there sufficient interest among commuters who work in the downtown Columbia, South Carolina area to consider the establishment of an on-going commuter express transit bus service?

3. What factors or conditions are important in influencing commuters to consider transit as an option to travel to and from work?

SmartRide Project Goal

The goal of the SmartRide Project is to explore the feasibility of establishing a mass transit commuter system in the Columbia South Carolina Metropolitan Area. The measure of success for the SmartRide Project is the ability to convince commuters to get out of their motor vehicles and use the SmartRide bus as a means of getting to work.

SmartRide Project Objectives

1. Examine commuter transportation needs and related concerns to design a temporary project that would provide transportation services to work locations in the downtown Columbia, SC area.

2. Document reasons to refocus transit planning on services and initiatives that include non-transit-dependent residents, as well as current transit patrons.

3. Collect and analyze project performance data to quantify participation level.

4. Make available to transit operators and policy makers a report that outlines the procedures followed in carrying out the SmartRide Project, the project performance numbers during the operational phase of the project, and recommendations for supporting commuter-focused transit services in the State.

SmartRide Project Background

The SmartRide Research Project grew out of the SCDOT's Executive Director Elizabeth Mabry's desire do a park-and-ride style demonstration project to find out if commuters would actually leave their motor vehicles to ride a transit bus to their downtown work locations.

According to the 2000 Census, South Carolina was among a few states registering less than 1.0% of total commuting travel as being by way of public transit. While transit offers some personal cost benefits to users, 79.4% of the State's working commuters drive alone to work. Commuter traffic in the larger urbanized communities of Charleston, Columbia and Greenville continues to grow each year. The construction of new roads is an option in addressing growing traffic demand, but State transportation leaders recognize that the construction approach will not continue to be a practical option indefinitely. The limited availability of land for new road construction, environmental degradation and stricter air quality regulations, and the obvious consequences of increased traffic congestion suggest a varied approach to the State's need to address and manage traffic demand.

While the SmartRide Research Project is not expected to address completely all issues of traffic demand, congestion and air quality, it can represent one of the innovative options upon which the State can build a multiple approach to resolving community issues.

Previous Park And Ride and Commuter Transit Efforts in South Carolina

The SmartRide Research Project was not the only initiative in the State to provide commuter transportation service by bus. SCDOT established commuter vanpools and park and ride lots in the 1970s and 1980s in conjunction with the Interagency Council on Public Transportation, the Office of the Governor and the ten regional councils of governments (COGs). The program was subsequently abandoned. SCDOT funded the ten COGs in the late1970s and the 1980s to develop commuter vanpool programs in their region. The success varied, BCD COG had the most successful program. In 1983 SCDOT contracted with the BCD COG, Catawba COG, and Santee-Lynches COG to establish donated Park and Ride parking spaces in their communities including shopping centers, churches, etc.

SCDOT Commission in March 1983 approved the construction of four Park and Ride lots at the following intersections:

U.S.17A and I-26 (Berkeley County)
U.S. 378 and I-20 (Lexington County)
U.S. 378-76 and S.C. 261 (Sumter County)
S.C. 215-302 and I-26 (Lexington County) (plans later abandoned)

The Park and Ride facility at U.S. 378 and I-20 was used in the SmartRide Research Project as one of the pickup locations. A number of requests from local government were received for additional Park and Ride lots be constructed at specified sites in their community. No official action was taken.

Below is a list of existing transit services that address commuter needs in various parts of the State.

TABLE 1-1: EXISTING COMMUTER SERVICES IN THE STATE

NAME	TRANSIT AGENCY	SERVICE PROVIDED
The Rock Hill Express (82X)	Charlotte Area Transit Service	Provides work-related transportation to Charlotte, NC for York County (SC) residents
The 4-U Route	Clemson Area Transit, City of Anderson Transit, and the Anderson County Government	Offers connecting transportation to the communities around the four universities in Pickens and Anderson counties
PDRT A/Myrtle Beach Commute	Pee Dee Regional Transportation Authority	Provides transportation to Myrtle Beach and the Grand Strand area for Dillon and Marion county residents
Myrtle Beach Commuter Service	Santee Wateree Regional Transportation Authority	Provides residents of Clarendon, Lee and Sumter counties with transportation to Myrtle Beach
Eastover Commuter Service to Columbia	Santee Wateree Regional Transportation Authority	Provides residents of Eastover and Hopkins communities with transportation to Columbia
Sumter to Columbia Vanpool	Santee Wateree Regional Transportation Authority	Provides Sumter County residents with transportation to Columbia
Standard/Dupont Vanpool	Santee Wateree Regional Transportation Authority	Provides transportation to plant workers in Lee and Sumter counties, in cooperation with the Standard/Dupont plant

These on-going transit efforts show the viability of commuter-related operations. All of these transit efforts are important and may indicate that there exists other opportunities to provide creative and effective services. The SmartRide Research Project is unique in its approach to provide transit services in that it targeted community workers who owned motor vehicles. The Project challenged the generally accepted notion that automobile owners would not leave their vehicles to use transit services. Finding similar opportunities and actually establishing the framework to carry out resulting transit activities will require partnerships, creativity in identifying and addressing needs, commitment to serve potential transit patrons, and the willingness to attempt new ways of delivering transit services.

Coordination Possibilities With Commuter-Focused Transit Service

The SmartRide Project raised many important issues regarding transit issues in South Carolina. While the focus and planning of the project was primarily on commuting workers, other residents could benefit from having available reliable transportation from the outlying communities into urbanized areas. In fact, at one senior citizen used the SmartRide services from Newberry on a regular basis to attend medical appointments in Columbia. If capacity needs are properly addressed, commuter-focused transit activities could be integrated into a larger network of coordinated transportation services for the benefit of residents in a much larger region and with a broader range of transportation needs. The successful integration of such diverse transit activities would require that the service remain punctual and reliable.

South Carolina has three main urban transit systems located in Charleston, Columbia and Greenville as well as 15 other regionally operated transit systems. South Carolina also has over 150 Human Services Agencies that provide transit services to local elderly and disabled persons. The effective coordination of transit services by these various operations can be used to improve access to commuter-focused transit services.

Reverse Commute Possibilities With Commuter-Focused Transit Service

The SmartRide Research Project sought to explore a feasible transportation alternative for commuters who work in a major urbanized area of the State. Many suburban communities around urbanized areas have been experiencing rapid growth in residential and commercial development. These growth patterns also have represented an increase in employment opportunities in suburban communities. While the traditional commute has been from surrounding communities into the city, some downtown residents commute out to suburban employment sites. This situation has been given the name of "reverse commute" and could represent a target population of workers who could benefit from a well-designed commuter-focused transit operation.

During the outreach and operation phases of the SmartRide Research Project, several inquires were made regarding the possibility of transporting city residents to suburban communities. The SmartRide Project was not set up to handle this additional task; however, this possibility should be explored in particular communities that are considering on-going commuter-focused transit service.

In recognition of the reverse commute employment trend in many communities, the Federal Transit Administration (FTA) has funded the Job Access and Reverse Commute (JA&RC) Program for the last several years. Several transit providers in South Carolina have used this funding source to enhance and tailor transit services more to urban residents who work in suburban communities.

Commuter-Focused Transit And Passenger Rail Service

Over the years a number of studies have been performed on the availability of rail passenger services and coordination with other modes of transportation. The effectiveness of passenger rail service is directly related to convenience and cost. This convenience includes the connections on a local level once the traveling public reaches the train station. Local ground transportation is needed as a means to get individuals directly to each person's desired destination.

Central Midlands Council of Governments engaged R. L. Banks and Associates, Inc. to conduct a Regional Rail Study. This study for future passenger rail service was completed in the year 2000. After a review of 9 potential corridors into the Columbia area, three corridors were selected as the highest priorities. These three corridors were as follows:

- Camden to Columbia
- Batesburg to Columbia
- Newberry to Columbia

Of these, the Camden and Newberry corridors were selected for the express bus service research project. Since 1989,traffic has increased at an annual rate of 4.8% on I-20, which parallels the Camden corridor and 3.8% on I-26, which parallels the Newberry corridor.

With traffic growth in all areas in and around the Capital City area, it appears that as the express bus project grows, plans should be made for future development and coordination of multimodal centers which would include rail as well as all rubber tired modes of transportation.

This multimodal center concept is not only true for Columbia, but should be a consideration in all of the urban areas in South Carolina.

Air Quality and Other Potential Community Benefits

An effective and well-utilized commuter-focused transit operation could represent the reduction of a number of motor vehicles from the daily traffic event called "rush hour". A reduction in the number of vehicles on the road translates into a reduction in emissions for volatile organic compounds (VOCs) and carbon monoxide (CO). Transit goals that seek to provide a higher percentage of overall trips to work in the form of transit can help to maintain improvements in the area of air quality.

Other benefits

- Commuter-focused transit has the potential to reduce congestion during peak commute hours (thereby improving air quality)
- Fuel and vehicle cost savings for the commuter (thereby promoting a shift from Single Occupant Vehicle utilization to mass transit)
- Enhanced highway safety (thereby protecting air quality by preventing traffic delays)
- Commuter-focused transit could be presented as a potential strategy for the counties under the Early Action Compacts for ground-level ozone

Initiating efforts to carry out a commuter-focused demonstration project in and around the Columbia urbanized area required the expertise and resources of many professionals within and without the SCDOT organization. Initial concepts and ideas had to be placed in concrete detail and conveyed to potential project partners, potential project participants, and the various communities within the project area. The SmartRide Research Project sought to address whether or not commuting workers would park their motor vehicles and ride a transit bus to work. While the idea of commuter transit is not new to South Carolina, the SmartRide Research Project challenged the generally accepted notion that individuals with their own functioning motor vehicles would not opt to use transit. The successful operation of a well-utilized commuter-focused system could enhance overall transit function in the State as well as help to address community issues such as congestion mitigation, increased transportation options, and the reduction of harmful emissions into the atmosphere.

SECTION 2

Procedures and Methodologies

Project Administration

The SmartRide Research Project was an agency-wide effort at the SCDOT. The concepts, parameters and plans of the project were proposed and carried out by the SmartRide Project Development Committee. The Deputy Director of the SCDOT Mass Transit Office addressed decisions that arose during the planning and operational phases of the project. A number of volunteers from SCDOT provided many hours of their time to ensure that needed contacts were made, marketing efforts were realized, surveys were completed, and project information was disseminated.

Project Scope

The SmartRide Research Project operated in designated communities around the Central Midlands planning region of South Carolina. The scope of the Project was to provide scheduled transit service during the morning hours from designated pickup locations into the downtown Columbia area, and return trips during the afternoon. Services were to be provided on normal business days beginning on October 6th of 2003 and ending on October 31st of the same year. The original communities that were to be involved included Irmo, Lexington, Newberry, and the rapidly growing Northeast Columbia area, all in South Carolina.

Observations, service data and survey information gathered from the execution of the Project were to be used to provide conclusions regarding the utilization of the transit-focused demonstration project, and recommendations for similar efforts in the future.

SmartRide participants chat and relax during their morning commute.

Target Population

All residents were eligible to use the SmartRide buses at any time during the operational period. The research questions for this project focused on the high number of commuters who drive into the city during weekdays to arrive at their places of employment. In keeping with the focus on commuters who usually drive alone to work, the SmartRide Research Project attempted to design the transit operation in a manner that would encourage this group of commuters to participate. The 2000 U.S. Census indicates that 79.4% of South Carolina workers over the age of 16 drive to work alone. The focus on commuters who drive to work alone should not be interpreted as a competitive effort with the other beneficial commuter transit services being provided to workers by existing transit systems. The targeted population of the SmartRide Research Project represents one of the innovative approaches by which overall transit services could be improved in the State.

Target Communities

The State's capital city of Columbia served as the destination point for passengers who participated in the SmartRide Research Project. This choice facilitated project management efforts, since most of the staff on the Project Development Committee also worked in the Columbia area. Most importantly, the Columbia area receives a very large number of commuters who drive in from neighboring communities.

Based on year 2000 Census data, the four most populous counties in the Midlands (Richland, Lexington, Kershaw, Newberry) have 317,407 commuters. The biggest inflows into Richland County are from Lexington (44,237 commuters), Kershaw (6,582 commuters), Sumter (2,289), Fairfield (2,758 commuters), and Newberry (1,930 commuters). Total inflow into Richland County is 69,043 compared to Newberry County with an inflow of 3,394. Richland County also has one of the largest outflows (to Lexington County 18,860), Newberry County (lowest county population) has only a total outflow of 5,431. Of the four counties, only Kershaw had a decrease in inflow (from 26% to 25%) during the past decade. Lexington increased 2%, Richland 3%, while Newberry increased 8% (from 17% to 25%). Thus commuter traffic flows have increased in the past decade similar to the national and regional trends.

Table 2-1 shows select community characteristics of the communities involved in the SmartRide Research Project. The Project included communities from all of the counties having major commuter inflow into Columbia, except Fairfield and Sumter Counties. Project limitations and the inability to secure parking authorization at desired locations prevented the extension of SmartRide services into other communities around the Midlands.

Table 2-1: Communities That Participated In The SmartRide Research Project

Place	Rural/Urban Community Description	Year 2000 Population	Number of SmartRide Pickup Locations	SmartRide Parking Facilities
Columbia, SC	Urban	116,278	N/A (Destination)	N/A
Chapin, SC	Rural	628	1	O'Cain Advertising
Irmo, SC	Urban	11,039	2	DMV Office Midlands Tech
Lexington, SC	Urban	9,793	3*	Piggly Wiggly SCDOT Park-&-Ride Lot Lexington Co. Auxiliary Bldg
Little Mountain, SC	Rural	255	1	Town Gazebo
Lugoff, SC	Rural	6,278	1	Days Inn on Hwy 601
Newberry, SC	Rural	10,580	1	Newberry Plaza

Four of the communities involved in the project are rural in characteristic. Again, efforts to include an additional pickup location in the urbanized Northeast section of Columbia were unsuccessful.

The Selection of SmartRide Pickup Locations

Traffic on certain highways coming into the Columbia area is known to be very congested during the morning and afternoon rush hour periods. Interstate 26 Eastbound from the Chapin and Newberry communities, State Highway 277 from the Northeast section of Columbia and Interstate 20 Westbound from the Camden area are just a few of the known arteries that handle many vehicles during peak traffic periods. Ideal pickup locations were chosen based on facilities that were considered to be more convenient for commuters traveling from or through a particular community. The Northeast section of Columbia was considered a prime candidate for the SmartRide Research Project due to the increased development that has taken place in that area. Other communities that were on the preliminary list for the project were Camden, Irmo, Lexington and Newberry.

Staff from SCDOT drove around the various communities in an effort to identify properties that might be suitable for parking facilities for the SmartRide Project. SCDOT employees were looking for properties with the following characteristics:

- Located in a community with sufficient distance from the downtown Columbia area to make the use of transit buses reasonable.

- Located in a commercially developed area.

- Had an ample number of parking spaces so that usage by SmartRide participants would not adversely impact parking availability for the business.

- Had a good circulation system and service roads to allow a bus to maneuver its way around without damaging the parking lot pavement.

- Located close to a signal light to allow safe entrance back onto the main highway.

A list of approximately 30 properties was compiled from the above activity. This list was subsequently reviewed by the professional drivers at the Central Midlands RTA, who actually visited the locations. A shorter list was then developed, based on certain properties having been eliminated by the professional drivers. This list was then given to the SCDOT Right-of-Way staff to attempt to gain permission from the owners to use the properties.

Employees from SCDOT district offices made contact with the owners and managers at the businesses and organizations on the list of potential parking facilities. The SmartRide Research Project was explained and the request was made to allow a part of their parking facility to be used for the four-week project. Success was not automatic, and some of the owners and managers refused the request for various reasons. Staff efforts to obtain permission to use a suitable facility in the Northeast section of Columbia were unsuccessful. However, persistence was rewarded as the project ended up with a total of eight temporary parking locations in the communities of Irmo, Lexington, Lugoff and Newberry.

After the operational phase of the SmartRide Project began, additional efforts were made to secure extra parking facilities in Town of Lexington and the Northeast section of Columbia. After the SmartRide services had been operating for two weeks, an additional pick up location was added to the Town of Lexington. Due to time constraints, a suitable parking location was not found in the Northeast section of Columbia. The parking facilities used in the SmartRide Project are listed in Table 2-1.

The cooperation of the property owners was a critical factor in the success of the SmartRide Research Project.

A downtown worker exits a SmartRide bus near the State Capital complex in Columbia.

Downtown Drop-Off Locations

The majority of the drop-off points were the same as the existing downtown bus stop locations for the regular city bus system. Due to the limited number of vehicles that were available for the project, most of the drop-off points had to be clustered near the downtown area so that a reasonable drop-off time could be established for the last passenger to leave the bus. At the beginning of the second week, minor changes were made to the drop off locations to encourage greater efficiency and consistency in the movement of the buses. A map of the downtown drop off locations is located in Appendix. A.

Identifying Project Partners/The Importance of Project Partners

In the early stages of the project, it was determined that Project Partners would be essential in order for the SmartRide Research Project to be successful. Three types of project partners were identified for this project – Business Partners, Operational Partners and Media Partners.

Business Partners were needed to reach potential project users in their working environments. These partners would also helpful in generating enthusiasm among potential riders. After reviewing potential partners, it was determined that the business partners should be agencies and businesses located in the downtown service area. These partners should employ the project's target audience - persons who might travel from the outlying areas of Columbia into the downtown area for work each day. A list of downtown agencies and businesses was developed from information gathered from the Columbia Chamber of Commerce and the South Carolina State Agency Directory. On August 14th, 2003, Directors and CEOs of these businesses were invited to a partnering session held in the Carolina Center. More than 25 individuals took advantage of this invitation to hear more about the SmartRide Research Project. As a result of this first partnering meeting, citywide contacts were formed. These contacts provided an important link to our target audience. Email addresses and phone numbers were obtained from partners to speed access to information related to the project.

Operational partners were needed to provide logistical assistance for the project. It was determined that Central Midlands Regional Transit Authority (CMRTA) would provide vehicle and driver assistance for the project. In addition, operational partners in the outlying Columbia areas were needed to provide the adequate and safe parking areas desired for the project. Potential operational partners were determined based on a review of businesses located in the area needed for our parking locations. The resulting operational partners were an essential element in the project's success.

Media partners were also needed to reach the project's target audience. These partners were comprised of media outlets all over the Columbia area. The project gained invaluable media attention from television stations, radio stations, and newspaper media from all four counties targeted for the project.

Acquiring Needed Transit Vehicles

During the initial planning stages of the SMART RIDE Research Project it was determined that Central Midlands RTA did not have the enough rolling stock available to operate the commuter service and still maintain the fixed route service for Metro Columbia. Having enough vehicles to operate four routes was essential to execution of the project. This obstacle was quickly overcome with the assistance of fellow transit partners from around the state.

Staff from the Project Development Committee and the SCDOT Mass Transit Office coordinated with transit operators from around the state to acquire additional vehicles for the project. Three agencies delivered six vehicles for CMRTA to operate for a period of 45 days. The 45 days allowed CMRTA time to acquaint the drivers with the vehicles and to operate in four different communities utilizing eight vehicles. Berkeley-Charleston-Dorchester Regional Transportation Management Agency, Williamsburg County Transit, and Santee Wateree Regional Transportation Authority asked for nothing in return to utilize the vehicles they made available to carry out the Project. The assistance of these entities greatly facilitated the objectives of the SmartRide Research Project.

Project Marketing Efforts

Marketing for the SmartRide project began in the early stages of the project. A marketing communications plan was developed to carry the project from inception to completion. This plan included project branding as well as ongoing project marketing. The marketing communications plan was developed to take advantage of the full range of resources of the SCDOT Communications staff.

The following marketing efforts contributed greatly to the success of the project:

- A logo for the SmartRide project was developed. This logo allowed the project specific name recognition. The logo was used with every correspondence and marketing effort throughout the project.

- Media contacts were made with local outlets. These media contacts followed the project from inception to the end of the project. The media outlets used during the project brought specific attention to the project's purpose, and reached a broader audience than otherwise would have been available for the project.

- News Releases were sent to introduce the project. These news releases were essential to garner interest in the project.

- Introductory video was produced. The video developed by SCDOT Communications afforded interested project participants an inside look at the project, its mission, and purpose.

- Web site information was developed. Visitors to the SCDOT web site were able to download project schedules, complete a general interest survey, give comments about the project, and contact a project staff member.

- Project Business Partners were contacted for target project introduction meetings. These business partners supported the project, and relayed the project benefits to their employees.

- Kickoff ceremony was held to launch the project. This ceremony allowed a specific avenue for additional media attention, and signaled a beginning to the project.

- Media were invited for "ride-alongs". Many media outlets took advantage of the opportunity to have camera crews and reporters join project participants for a ride into Columbia. This provided a significant opportunity for those interested in the project to gain a better understanding of the project.

• Media days were established throughout the project. Media outlets were encouraged to call a project staff member during a ride into Columbia. These media days were established each Wednesday of the project. Project staff members were assigned a cell phone number for such calls.

• Television and radio appearances were scheduled for project staff members. Project staff was able to promote the project through scheduled appearances on local television and radio programs.

• Public service announcement was developed. This PSA was sent to media outlets for further project promotion.

Copies of selected marketing tools used in the SmartRide Research Project are found in Appendix A.

SCDOT Executive Director Elizabeth Mabry addresses Project supporters and the media at the October 2, 2003 SmartRide kick-off event.

Consideration of High Occupancy Vehicle (HOV) Lanes

SCDOT leaders considered implementing some form of dedicated highway lane on a temporary basis during the SmartRide Project period. Designated lanes for vehicles carrying multiple passengers or High Occupancy Vehicle (HOV) lanes are intended to facilitate the movement of these vehicles through traffic during peak traffic periods. When functioning as intended, traffic in HOV lanes moves at a faster rate than traffic in normally congested lanes. Properly functioning HOV lanes are also thought to promote the use of transit, carpooling and other forms of ridesharing by commuters.

A Subcommittee was launched to investigate the feasibility of implementing HOV lanes for a portion of the SmartRide Research Project period. The Subcommittee researched the experiences of other states with HOV lanes, established criteria to determine which of the State's roadways would be suitable for HOV deployment, and ran computer model variations projecting traffic behavior with HOV lanes.

Upon researching typical implementation and operation of HOV lanes in other states, the Subcommittee expressed concern about employing this option during the short duration period of the SmartRide Research Project. The report from the Subcommittee indicated that most HOV lanes are planned over a period of several years and involve a multi-disciplined approached that includes law enforcement, public awareness efforts, highway maintenance, engineering crews and policy makers. So therefore, HOV lanes were not developed for the SmartRide Research Project. An abbreviated version of the HOV report can be found in Appendix F of this Report. A copy of the full report can be obtained from the South Carolina Department of Transportation.

Project Liability Issues

Liability issues during the operation period remained with the Central Midlands RTA as a result of the service agreement between the transit operator and the SCDOT. Throughout the operational period, SCDOT staff maintained close contact with the managers of CMRTA, so that any potential issues or complaints by passengers could be addressed in a timely manner. SCDOT staff remained involved with nearly all issues that arose so as to give the project the best chance to avoid any safety, security and convenience issues that might affect participation negatively.

The signed agreements that authorized use of the various parking facilities during the operational phase of the project did not address liabilities for any damages. Throughout the project period, both SCDOT staff and CMRTA drivers gave participant safety and security high priority. Safety issues were promptly reported to CMRTA and SCDOT staff during the project period.

The General Interest Survey

A general interest survey was developed to determine the level of interest in the project. This survey was a short, one page document asking general questions about the rider's current commuting practices, and their level of interest in commuting via a program like SmartRide.

The surveys were distributed to potential riders through all avenues available.

- Initial surveys were distributed at the Partnering Session for business partners held on August 14, 2003. These business partners distributed the survey to their employees and encouraged employees to send responses to staff members at SCDOT.

- A large majority of surveys were completed at the additional business partnering sessions across the Columbia area. Interested riders who attended these sessions completed the surveys during the session.

- The survey was made available through email. It was sent to interested riders who requested it.

- The survey was posted on the SCDOT website. Using a simple link, interested riders could access the survey and complete it online.

General interest surveys continued to come in to SCDOT long after the operational phase of the project began. In total, more than 300 responses were gained from this instrument. Preliminary results from the general interest surveys were used to help anticipate the possible participation level during the first week of operation. The copy of the actual survey used in the Project can be located in Appendix C of this Report.

The Weekly Service Quality Surveys

The weekly surveys were designed by SCDOT staff for the purpose of recording the opinions of SmartRide participants throughout the project period. Specific questions in the survey were intended to provide feedback from SmartRide users on the following:

- Previous use of mass transit services
- Income and educational background
- Usual means of traveling to work
- Opinions of the project's quality of service

The same survey was used for the first two weeks. After the second week, an addition was added to the survey, which focused on cost savings from using the SmartRide services and riders' opinions of what would constitute a reasonable fare.

A final project survey was taken on the last day of the SmartRide Project. This survey covered project benefits and reasonable fare for the service. The additional survey was designed for any resident, regardless of whether or not the person had ever participated in the SmartRide Research Project. Blank copies of the weekly and the benefits surveys are located in the Appendices D and E respectively of this Report.

Project Budget

State funds were used in carrying out the SmartRide Research Project. The largest expenditure category was the operation phase, which was carried out by the Central Midlands RTA. Table 2-2 below budgeted expenditures for the various aspects of the SmartRide Research Project.

Table 2-2: Project Expenditures

EXPENSE CATEGORY	AMOUNT
Central Midlands RTA Service Agreement	$46,560.00
Project Promotional Items	$4,243,36
SmartRide Signs	$1,295.26
Final Report Production Costs	$1,000.00
Total Expenditures	$53,098.62

There were some in-kind donations that are not reflected in the SmartRide Budget. This includes the cost-free use of transit vehicles from three other transit agencies in the State during the project period. An itemized list of expenditures can be found in the Appendix I of this report.

SECTION 3

The General Interest Survey Results

The general interest survey was made available at all of the partnering and outreach sessions held prior to the initiation of SmartRide bus services in October of 2003. The survey was also on the SmartRide website and some were taken over the telephone. In an effort to estimate the number of passengers that might show up on the first day of SmartRide services, SCDOT staff made telephone calls to a number of those general interest survey respondents who indicated that they definitely will participate or that they will consider participating in the SmartRide Project. The outcome of this informal telephone follow up to the general interest survey is given in the table below.

TABLE 3-1: Results from informal telephone calls to estimate participation

COMMUNITY	NUMBER COMMITING TO PARTICIPATE
Northeast Columbia/Lugoff	15
Lexington	22
Irmo	16
Chapin	16
Newberry	7
Other	17
TOTAL	**93**

The outcome of calling survey respondents prior to the start of SmartRide services indicated that approximately 100 persons could be expected to show up for the various SmartRide buses on the first day of service. The outcome also hinted that service activity in the Lexington area would generate the greatest number of passengers for the Project.

Overall General Interest Survey Results

There were a total of 411 completed general interest surveys that were submitted to SCDOT. The results from each of the five questions are displayed in the following Tables

Table 3-2: (Question 1) Please rate your level of interest in the proposed service.

SELECTION	NUMBER OF RESPONSES	PERCENT OF TOTAL
Very Interested	170	41.4%
Somewhat Interested	125	30.4%
No Interest	103	25.1%
Undecided	13	3.2%

According to survey results, the interest level in the SmartRide Research Project was relatively high among the 411 respondents. The combined level of interest of all respondents in the Project was over 70 percent. For various reasons, the high interest level demonstrated in the responses to Question number one did not translate into similar numbers of respondents who were willing to commit to participating in the SmartRide Project. Table 3-3 shows that 24.1% of the 411 respondents indicated that they would definitely participate in the Project.

Table 3-3: (Question 2) Please indicate your potential participation in this service.

SELECTION	NUMBER OF RESPONSES	PERCENT OF TOTAL
Would definitely participate	99	24.1%
Would consider participating	169	41.1%
Would not participate	122	29.7%
Undecided	19	4.6%

The larger "Would consider participating" category of survey responses offers some hope that the expected numbers of participants could be increased with future projects and programs. Table 3-4 shows that one possible factor that affects williness to participate is the availability of suitable pick up locations.

Table 3-4: (Question 3) Currently, Northeast Columbia, Lexington, and Irmo/Chapin are being targeted for this service. Please indicate which of these areas would be most suitable for you commute.

SELECTION	NUMBER OF RESPONSES	PERCENT OF TOTAL
Northeast Columbia	56	13.6%
Lexington	73	17.8%
Irmo	84	20.4%
Newberry	15	3.6%
Chapin	50	12.2%
Camden	17	4.1%
None Suitable	113	27.5%

Table 3-4 also shows the Northeast section of Columbia as possibly being a community served by the SmartRide Research Project. SCDOT staff was not able to secure a suitable parking facility in this area, so the actual participation of the project could possibly be less than the survey results indicate.

The survey results demonstrated that individuals had various reasons for their interest in the SmartRide Project. Table 3-5 shows that cost savings was a primary reason for many who might participate in the Project.

Table 3-5: (Question 4) If you would participate, please indicate what most interests you about this proposal.

SELECTION	NUMBER OF RESPONSES	PERCENT OF TOTAL
Convenience	112	27.3%
Time Savings	47	11.4%
Cost Savings	261	63.5%
Other	50	12.2%

Other reasons for having interest in the Project include community issues such as improving air quality, reducing traffic congestion and helping to promote overall mass transit services in the region.

Survey respondents were also asked to indicate reasons for lack of interest in the SmartRide Research Project. Table 3-6 (below) shows that inconvenient scheduling was the more popular reason overall for lack of interest in the Project. The other two significant reasons for lack of interest were having no suitable location for boarding the SmartRide bus (22.9%) and not have one's personal vehicle available while at work (21.4%).

Table 3-6: (Questions 5) If you would not participate, please indicate reasons for lack of interest.

SELECTION	NUMBER OF RESPONSES	PERCENT OF TOTAL
No suitable location for boarding	94	22.9%
Loss of personal vehicle	88	21.4%
Inconvenient scheduling	109	26.5%
Other	59	14.4%

Some of the reasons given by respondents that fall under the "Other" category include the loss of flexibility during the day, the need to transport children before and after work, having a personal schedule that requires travel to other locations before returning home, and living to close to the downtown Columbia area for the SmartRide service to be effective.

GENERAL INTEREST SURVEY ANALYSIS

An attempt is made in this segment to break out select survey responses based on the four different options of Question number two (2). The responses to Question 2 define the respondents' intent to become involved with the SmartRide Project more so than the selections from any of the other four survey questions. The percent calculations used in this segment are based upon the number of responses chosen, which may be greater than the number of persons represented since each person could have selected more than one response.

Survey Respondents Who Indicated They Would Definitely Participate in the SmartRide Project

This is the group of respondents that SmartRide Project planners were expecting to make up the bulk of the riders during the operational phase in October. Table 3-7 shows the area selections of survey respondents who indicated a definite intent to participate in the Project. These responses correspond to Question Three on the general interest survey.

Table 3-7: Area Selections of Respondents Indicating Definite Intent To Participate

Northeast Columbia	Lexington	Irmo	Newberry	Chapin	Camden	None Suitable
13	22	22	4	22	4	13%
13.1%	22.2%	22.2%	4.0%	22.2%	4.0%	13.1%

The results from this table differs from the overall results in Table 3-4 in that the percentages for Lexington and Chapin have increased significantly here. Also, the "None Suitable" responses fell to less than one-half of that in Table 3-4. The remaining percentages remained roughly the same as in Table 3-4.

The factors that most interest those with the greatest interest in the service are ranked in the following table. The sum of occurrences of these factors amounts to greater than 99 (the number of respondents who indicated that they would definitely participate) because each respondent had the opportunity to select more than one factor.

Table 3-8: Factors That Most Interest Respondents Indicating Definite Intent To Participate

FACTOR	NUMBER OF RESPONSES	PERCENT OF TOTAL
Cost Savings	76	76.8%
Convenience	52	52.5%
Time Savings	23	23.2%
Other	20	20.2%

The cost savings appear to have great influence, representing 76.8% among the respondents. Convenience, timesavings and “Other” follow in descending order. Some of the factors respondents listed under the “Other” category include the following:

- Environmental, air quality improvement or the conservation of natural resources
- Having the opportunity to read during the commuter trip
- Relieve the demand on the use of the family car
- The desire to see the project succeed with the hope that this would encourage serious consideration of more permanent commuter options, such as special lanes and commuter trains
- Stress relief from not having to battle rush hour traffic
- Safety
- Personal dislike for driving

Survey Respondents Who Indicated That They Would Consider Participating In The Project

A total of 169 survey respondents indicated that they would consider participating in the SmartRide Research Project. This number represents the largest group of 411 general interest survey respondents. Their responses to the survey questions on interest may provide information that could prove useful in boosting participation in similar projects in the future. Table 3-9 shows the responses to the factors that most interest this group of survey respondents. The responses are in ranked order based on the number of responses.

Table 3-9: Factors That Most Interest Respondents Who Would Consider Participating In The SmartRide Project

FACTOR	NUMBER OF RESPONSES	PERCENT OF TOTAL
Cost Savings	136	80.5%
Convenience	46	27.2%
Other	24	14.2%
Time Savings	20	11.8%

Cost savings apparently were an overwhelmingly important factor for the interest level of those who would consider participating in the SmartRide Project. Timesavings did not register as a major factor for many of the respondents. Some of the other reasons given by respondents for their interest are given below:

- Just to support mass transit in the Columbia area
- Environmental preservation and improvements
- Allow someone else to do the driving
- Aid traffic reduction during peak hours
- Reduce road rage
- Reduce congestion

Table 3-10 shows the number of responses of individuals who indicated that they would consider participating

Table 3-10: Reasons For Lack of Interest Among Respondents Who Would Consider Participating in the Project

FACTOR	NUMBER OF RESPONSES	PERCENT OF TOTAL
Inconvenient schedule	48	28.4%
No suitable location for boarding	34	20.1%
Loss of personal vehicle	28	16.6%
Other	14	8.3%

The following are some of the reasons cited by this group of respondents for their lack of interest in the SmartRide Project.

- No boarding location in Blythewood
- No boarding location near Southeast Columbia (Garners Ferry Road area)
- Project needs a Five Points drop off
- Need Calhoun County/St. Mathews Location
- Proposed drop off location is considered to be poor a selection
- Respondent works part-time out of town and uses car to transport work materials
- Need a Decker Boulevard (Columbia) pickup location
- Respondent desires to arrive at work earlier than project schedule permits
- A Shop Road drop off location is needed
- A State Park area (Farrow Road in Columbia) location is needed
- A Lugoff location is needed
- Respondent needs to have transportation available for meetings away from the work building
- Drop off location is too far to walk in inclement weather
- Project bus schedules do not allow sufficient time for possible traffic jams
- Would not continue to participate in project if riding with the bus driver turns out to be a scary experience

Survey Respondents Who Indicated That They Would Not Participate in SmartRide Project

These respondents indicated on Question number 2 that they would not participate in the SmartRide Project, which totaled 122 out of the 411 completed surveys. Table 3-11 below shows the number and percentages associated with their responses. Many of the survey respondents indicated more than one choice as the basis for their lack of interest in the SmartRide Project. For this reason, it cannot be assumed that addressing a single factor will be sufficient to convince individuals in this group to participate in a commuter transit program or project.

Table 3-11: Reasons For Lack of Interest Among Respondents Who Would Not Participate In The Project

FACTOR	NUMBER OF RESPONSES	PERCENT OF TOTAL
Loss of personal vehicle	54	44.3%
Inconvenient schedule	43	35.2%
No suitable location	38	31.1%
Other	38	31.1%

The loss of one's personal vehicle was the most popular reason given for lack of interest in the SmartRide Project. The percentages for this group are generally higher than the percentages of other survey respondents on the same question (except for the "Undecided" group, which will be covered later in this section). Some of the other reasons listed by respondents for their lack of interest in the SmartRide Project include the following:

- Loss of flexibility
- Work and personal schedule require an automobile
- The personal opinion that neither gas savings nor safety gains would be realized from participation in the project.
- Car required to transport child or children
- Respondent works within 5 miles of work location
- Respondent is a full-time telecommuter
- Job conflict
- Respondent lives in Orangeburg
- Respondent suffers from severe motion sickness
- The project does not serve the Winnsboro area
- There is no emergency recourse
- Nothing related to the project interests the respondent
- Respondent has unusual work hours
- Respondent is required to use state vehicle in performing work duties

Survey Respondents Who Indicated That They Were Undecided

Nineteen of the respondents indicated that they were undecided about their intent to participate in the SmartRide Project.

Table 3-12: Factors That Most Interest Respondents Who Were Undecided About Participating In The SmartRide Project

FACTOR	NUMBER OF RESPONSES	PERCENT OF TOTAL
Cost Savings	14	73.7%
Convenience	4	21.1%
Time Savings	0	0.0%
Other	0	0.0%

The undecided group revealed that costs savings and convenience were the two primary factors for their interest in the SmartRide Research Project. Table 3-13 shows that a smaller percentage of the undecided group was concerned about the availability of their personal vehicle during working hours (loss of personal vehicle at 10.5%).

Table 3-13: Reasons For Lack Of Interest Among Respondents Who Were Undecided

FACTOR	NUMBER OF RESPONSES	PERCENT OF TOTAL
Inconvenient schedule	9	47.4%
No suitable location	5	26.3%
Loss of personal vehicle	2	10.5%
Other	2	10.5%

Other reasons for a lack of interest in participation in the SmartRide Project by respondents who were undecided are given below.

- No drop-off location is suitable for agency employees
- Participation would require respondent to get up earlier in the morning
- Reluctant to leave vehicle in uncovered parking area, where it would be exposed to elements of the weather

SUMMARY OF GENERAL INTEREST SURVEY SECTION

According to the results of the general interest surveys, 99 respondents were willing to participate in the SmartRide Project. A larger number of respondents were willing to consider participating or were undecided at the time the surveys were administered. The interest level can be assumed to be at least one-fourth of the total of 411 survey respondents.

Some of the reasons that respondents indicated for not having interest in the Project included not wanting to use transit again, being a full-time telecommuter, loss of personal vehicle and loss of flexibility during the day. These reasons for not using commuter-focused transit probably cannot be addressed in an overall effort to make such services more appealing and convenient for potential users. In fact, the telecommuting option is seen as a positive trend in terms of community issues of traffic congestion management and efforts to reduce vehicular emissions. However, there are other factors that respondents indicated that could be addressed through a long-term marketing and educational campaign for commuter transit. Inconvenient scheduling and non-suitable pick up locations could be examined by the transit operations planning staff. Other personal conditions change to allow commuter transit to become a more practical option, such as school-aged children growing older and needing less transportation services from parents.

Cost savings appear to be an important factor for most respondents who expressed any degree of interest in the SmartRide Project. On the other hand, timesavings did not register as an important factor for any sizeable number of the respondents. Apparently, most respondents understand that the transit buses are subject to all of the probable time-delaying traffic conditions as all other vehicles on the highway.

The survey results indicate a significant level of support and excitement for commuter transit, even among some respondents who were not able to participate in the SmartRide Research Project. The survey responses represent many untapped opportunities and potential demand for commuter transit that could not be fully demonstrated by the SmartRide Project.

SECTION 4

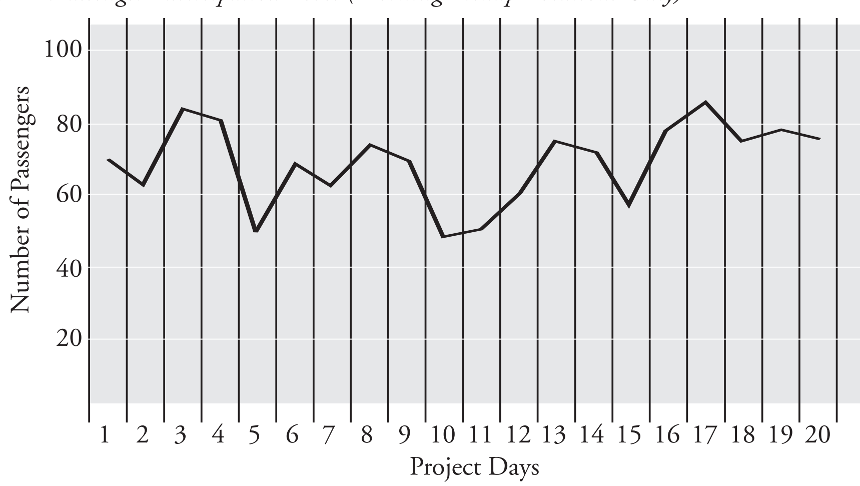
Overall SmartRide Commuter Transit Service

The overall activity level for the four communities served during the SmartRide Research Project was 2,730 passenger trips. This number includes both the first and second bus runs for each of the pick-up locations, and the return trips in the afternoons. On average, 68 persons participated in the SmartRide Research Project for the actual 20 days of operation.

Using the passenger boarding numbers from the morning pickup locations, the following graph shows the daily changes in rider participation for the duration of the SmartRide Research Project. In most of the graphs in this section, the morning passenger boarding numbers are used to represent the number of passengers. This is done to provide a reliable measure of the number of people who participated in the Project on a daily basis. As indicated previously, the total passenger trips (also called passenger boardings) include repeat trips by the same riders at a different time of the day. The morning boarding numbers are used to represent the number of passengers based on the assumption that none of the passengers arrived in downtown Columbia on more than one bus on the same day of operation. Graph 4-1 depicts the research period as a continuous twenty-day period, without the four weekends that occurred during the project period. SmartRide services were not provided during the weekends.

An enjoyable ride and friendly conversation characterized many SmartRide transit trips.

Graph 4-1:Passenger Participation Level (Morning Pickup Locations Only)



The SmartRide Research Project began with a solid demonstration of passenger demand on the project buses that served the selected communities. A total of 69 passengers were reported on the first morning of service (October 6, 2003). At approximately 4:55 PM on the first day of service, the rain began to fall over downtown Columbia. Rain was also falling during the early morning hours of the second day of SmartRide services, which may have accounted for a noticeable decrease in morning passengers. But participation remained strong and the Project had is highest number of riders (87) on the 17th day of operation (during the final week). Overall, passengers continued to use SmartRide services throughout the project period.

As the novelty of the project wore off after a couple of weeks of operation, the participation level continued to show periodic signs of increase. The final week of the SmartRide Research Project saw participation reach its highest weekly level. This is graphically demonstrated in the sharp and relatively sustained increase in the graph over Projects Days 16 through 20.

Project Performance-Expenditure Analysis

Several factors place the SmartRide Project in a unique category, which makes cost comparisons with regular transit operations unreasonable and inappropriate. Those factors are outlined below.

- SmartRide was a research project that included many unknown factors that could not be anticipated or planned for as with on-going transit systems.

- SmartRide was conceptualized, directed and managed by SCDOT staff (who are not trained transit operators), with the assistance of transit professionals at Central Midlands RTA.

- While the success of the transit service component was an important objective, the primary goal was the success of the research aspect of the SmartRide Project. Therefore, obtaining the data to address initial research questions remained the priority during the Project.

- Because SmartRide was a time-limited research project, no consideration was made for acquiring long-term capital and transit equipment that could reduce costs over time.

- The SmartRide Research Project was operated fare-free to all participants. Fare recovery comparisons were not possible with this project.

- Because the project was operated without a fare or cost to riders, the impact of a reasonable fare structure upon passenger participation could not be evaluated.

- The SmartRide project was done to determine whether or not commuters would actually use this type transportation as a means of traveling to work. The development of a commuter system that is more efficient or cost-effective would have to be the subject of a subsequent research project.

The following cost analysis is presented with the previous factors in mind. The total operation cost of the project was $46,560.00. This is strictly the cost that the Central Midlands RTA charged for providing drivers and vehicles for the project. The overall cost estimate for the entire SmartRide Project, which included marketing costs and SmartRide signage costs, was 53,099.00. The cost per passenger trip for the overall project is given in the following table.

Table 4-1: Cost Per Passenger Trip Calculations

Cost Type	Costs	Total Passenger Trips	Cost Per Passenger Trip
Project Operational Cost	$46,560.00	2,730	$16.69
Total Project Cost	$53,099.00	2,730	$19.45

The above cost factors do not include any of the labor hours committed to the project by staff at SCDOT. Cost is always an important factor in operating any type transit system. However, the emphasis must be reasserted that the SmartRide Research Project was not in competition with any transit systems in the State. Further studies and planning on the part of established transit operations and planning organizations would be needed to determine the most effective approach in providing commuter-focused transit to new transit patrons.

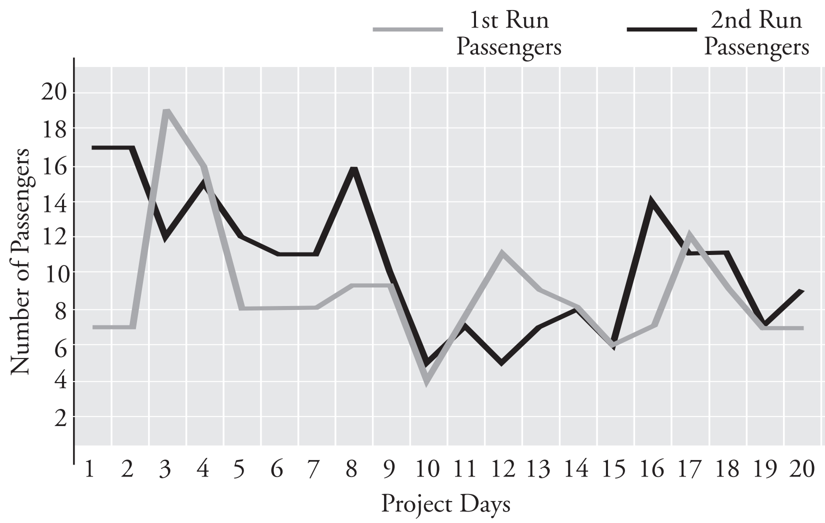
SMARTRIDE SERVICE TO THE FOUR INDIVIDUAL COMMUNITIES

Professional and courteous drivers helped to make the SmartRide Research Project successful.

Irmo Commuter Transit Service

The SmartRide services to the Irmo community produced a total of 779 passenger trips that included both the morning and afternoon services for the 20 days of operation. During the first week of operation, the Irmo SmartRide services initially registered passenger numbers that exceeded the numbers from SmartRide services in the other three communities. Graph 4-2 below shows a slow start for the first run that became strong, and a strong start that slumped during the first five days of operation.

Graph 4-2: Irmo Service Area Passenger Participation (Morning Pickup Locations Only)

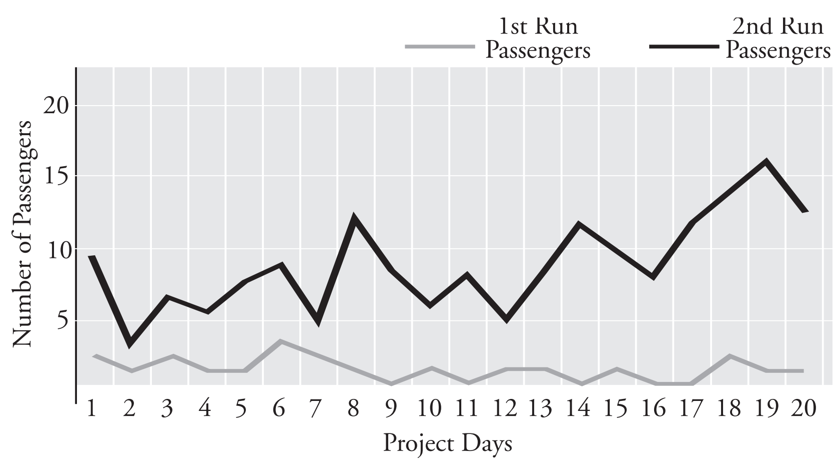


The passenger numbers for both Irmo runs eventually stabilized around an average of 9 passengers per day for the first run and 11 for the second run. The strong initial showing in passenger participation with the Irmo SmartRide service may indicate that there are opportunities for commuter-focused transit in this community provided that the right set of operational and supporting circumstances are in place (such as scheduling that avoids congestion, well-suited pickup locations, greater marketing efforts).

Lexington Commuter Transit Service

The Lexington SmartRide pickup locations produced 401 total passenger trips for both the morning and afternoon service activities. SmartRide services in the Lexington community demonstrated a clear preference for the later morning service schedule. The following graph of the passenger numbers for the Lexington service shows that the first run never really generated much passenger participation.

Graph 4-3: Lexington Service Area Passenger Participation (Morning Pickup Locations Only)

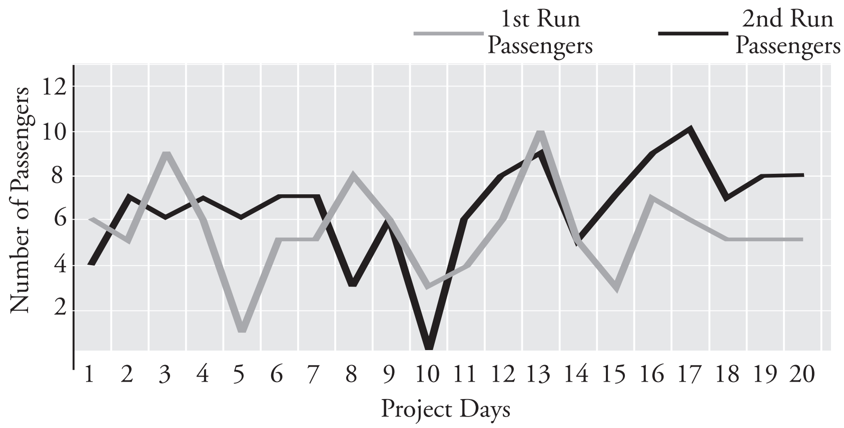


During the entire project period, the average number of persons who rode the SmartRide bus daily on the first run in Lexington was one (1). The second run in Lexington was utilized more and even shows a somewhat upward trend as the project period progressed. The average number of passengers who rode the second bus from Lexington was nine (9).

Lugoff Commuter Transit Service

An overall project total of 474 passenger trips were provided to SmartRide participants coming from the Lugoff pickup location. This number includes both the first and second runs during the morning and afternoon SmartRide service activities. The daily participation by passengers boarding the SmartRide bus at the Lugoff pick up location is show in Graph 4-4.

Graph 4-4: Lugoff Service Area Passenger Participation (Morning Pickup Locations Only)

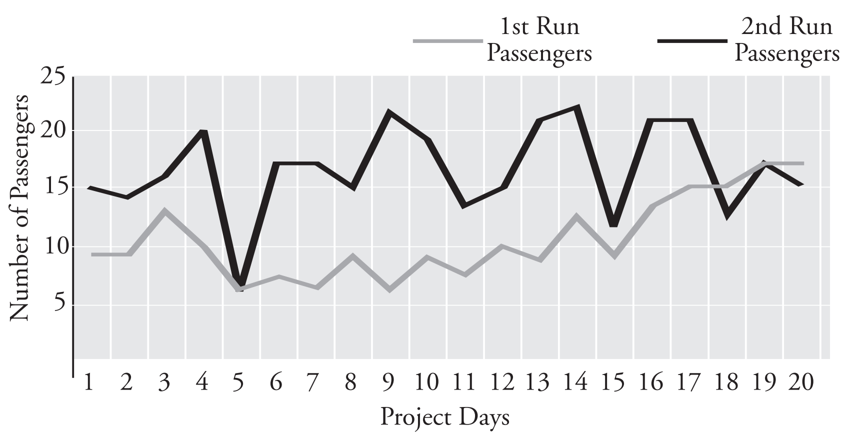


Both the first and second runs of the Lugoff SmartRide service reflected an average of 6 passengers daily on each run during the morning service times.

Newberry Commuter Transit Service

The SmartRide service to the Newberry-Little Mountain-Chapin communities generated 1,076 total passenger trips, including both morning and afternoon transit activities. This number of passenger trips represented nearly 40% of the total number of passenger trips provided during the entire project period. The following graph shows that the second run of the Newberry SmartRide service was actually the stellar performer of the project.

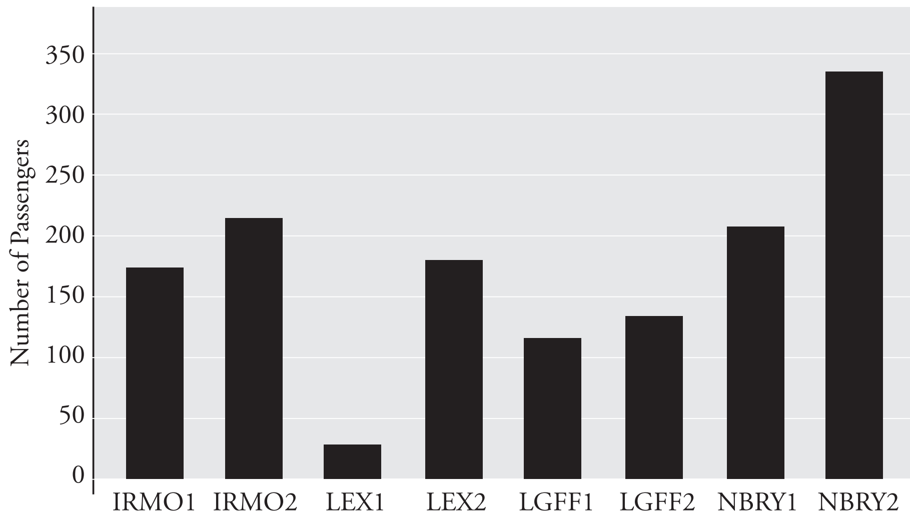
Graph 4-5: Newberry Service Area Passenger Participation (Morning Pickup Locations Only)



The second run of the Newberry SmartRide service had an average of 17 passengers daily riding during the morning hours. The number of passengers that boarded the second run during the mornings actually ranged from a low of 6 to 22. Passenger participation was relatively high and sustained on the second Newberry run. The morning passenger pickups of the Newberry SmartRide service from the Chapin location generally accounted for the majority of the passengers on the Newberry SmartRide buses.

Comparison of the performance of the eight commuter runs of the SmartRide Project shows the 2nd Newberry run with the greatest number of morning passenger boardings with 331. Table 4-6 shows the morning passenger boardings over the four-week project period.

Graph 4-6: Total Passenger Trips (Morning Pickup Locations Only)

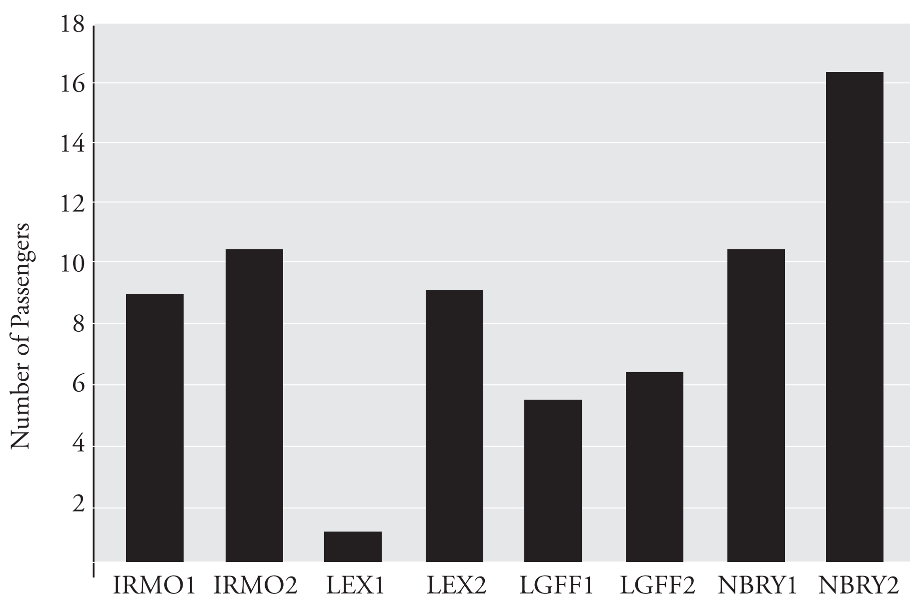


In every service area, the second run had higher passenger boarding numbers than the first run.

Average Number of Passengers Per Run Per Day (Morning Pickup Locations Only)

The average number of passengers per day is calculated by dividing the total morning passenger boardings by the total number of project days (20). The calculation can also be viewed as the average number of passengers per run per day. Table 4-7 compares the average passenger boardings for each project run.

Graph 4-7: Average Number of Passengers Per Day By Service Area and Run Number



The average passenger per day calculation shows that that second run of each community service tended to have greater utilization than the first run. This difference is especially noticeable with the data from the SmartRide services in the Lexington community. The average number of passengers per day for the first run of the Lexington service was one (1), while the average for the second run was nine (9).

While the overall project demonstrated a measurable level of demand for commuter-focused transit, this demand was not manifested equally across all of the communities served during the operational period. The table below compares percent changes in passenger trips from the initial week of the project to the final week.

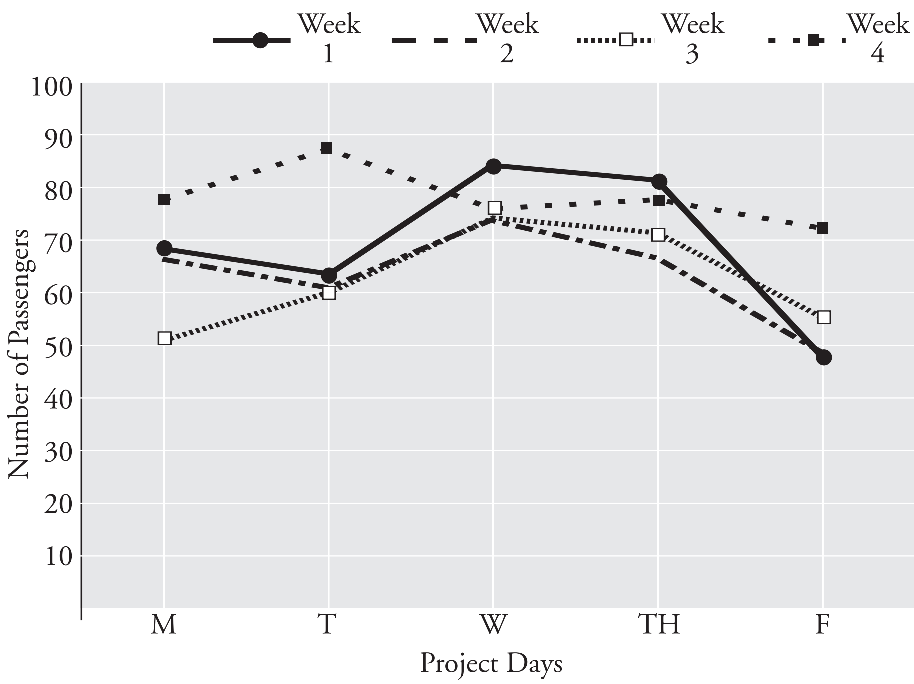
Table 4-2: Percentage Change in Participation First to Fourth Week (Morning Pickup Locations Only)

Run	Departure Time	Passenger Trips Ist Week	Passenger Trips 2nd Week	Percent Change
Irmo 1st Run	6:25 AM	57	42	26.3% decrease
Irmo 2nd Run	7:25 AM	73	52	28.8% decrease
Lexington 1st Run	6:35 AM	7	4	42.9% decrease
Lexington 2nd Run	7:35 AM	33	62	87.9% increase
Lugoff 1st Run	6:40 AM	27	28	3.7% increase
Lugoff 2nd Run	7:40 AM	30	41	36.7% increase
Newberry 1st Run	6:00 AM	47	77	63.8% increase
Newberry 2nd Run	7:00 AM	71	87	22.5% increase

One of the more obvious conditions that the above table indicates is the decrease in passenger trips experienced in three of the 8 runs. All of the decreases were greater than 25.0%, and in the case of the first run for Lexington, participation nearly disappears completely. Comparison of the different participation levels of the two Lexington runs implies that the schedule is just as important as the pickup location.

If the runs with significant increases in passenger participation reflected increasing momentum, there could potentially be further growth opportunities in serving those communities on a similar schedule.

Graph 4-8: Project Passenger Trends Over The Four Week Period



Passenger participation on the four Mondays during the SmartRide Research Project period shows various levels of activity. The actual numbers range from a low of 52 passengers on the Monday of the third week, to 78 passengers on Monday of the last week. Passenger participation on Tuesdays generally reflected a decline except for the final week of the project. The first three weeks of the project reflected higher passenger numbers on Wednesdays than on any other day of the week. Again, the exception to this observation happened during the final week of the project, where the number of passengers on Wednesday (76) was next to the lowest for the week. Passenger participation on Thursdays generally reflected a sustained level, where the numbers did not change drastically from the previous day.

Fridays tended to reflect a decline in riders with the SmartRide Research Project. Nearly all of the graphs reflect a decline on the first three Fridays of the project period. The Friday of the final week of operation shows an overall decline relative to that particular week; however, the participation trend for the final week was noticeably upward. The entire SmartRide Project required focused attention during the operation phase due to demands of service, media attention and information demands from the public. An elevated level of attention was placed on the project during the final week of operation to show appreciation for all project participants and to attempt to sustain previously realized weekly performance levels. There was also active support by many of the SmartRide passengers to recruit additional riders through the end of the project in an effort to increase ridership numbers and bolster support to continue the service after the project period ended on October 31st.

The Average Number of Passenger Trips Per Service Run

The average number of passenger trips across the eight (8) runs operated provides a measure by which the results of the project can be compared internally. Table 4-3 gives the passenger boarding or passenger trip numbers for each of the runs and the calculated average passenger trips per run.

Table 4-3: Average Passenger Trips Per Run

Run	Total Project Passenger Trips	Project Average (2,730 divided by 8 runs)	Relationship to Project Average Passenger Trips
Irmo 1st Run	356	341	4.4% above
Irmo 2nd Run	423	341	24.0% above
Lexington 1st Run	51	341	85.0% below
Lexington 2nd Run	350	341	2.6% above
Lugoff 1st Run	216	341	36.7% below
Lugoff 2nd Run	258	341	24.3% below
Newberry 1st Run	417	341	22.3% above
Newberry 2nd Run	659	341	93.3% above
Project TOTAL	2,730	N/A	N/A

Exceeding the 341 passenger trip average per run does not guarantee profitability or success of a particular run; it is simply a measure of participation and comparison with the eight runs of the project. Four of the runs fell below the average, as shown in Table 4-3. The first run of the Lexington SmartRide service struggled from the beginning of the project. Both of the Lugoff runs reflected numbers that were below the average, but also showed increasing trends and interest throughout the project period. The second run of the Newberry SmartRide service was nearly twice the project average of passenger trips. A total of five of the project runs registered passenger trips that exceeded the project average.

In summary, the twenty-day SmartRide Research Project demonstrated that some commuting workers in the downtown Columbia area would use commuter-focused transit as a means of traveling to work. The Project indicated that interest levels in commuter-focused transit vary according to factors such as pickup locations, drop off locations, schedules and arrival times, the day of the week, and the reliability of the service. The level of interest in commuter-focused transit services, as indicated by actual participation in the project, was relatively high with some of the service areas. The second run of the Newberry SmartRide service in particular showed promising numbers during the research period.

Most SmartRide participants were very pleased with the service, as indicated by these smiling faces.

SECTION 5
Wednesday Survey Results

INTRODUCTION

Volunteers from SCDOT provided the Wednesday Survey to SmartRide commuters on the following Wednesdays: October 8, October 15, October 22, and October 29. The commuters were asked to complete a survey while riding the bus and return it to an SCDOT volunteer before disembarking. Surveys were then returned to the SCDOT Mass Transit office, where they were numbered, sorted by route, and the responses were recorded in a database. The complete text of the Wednesday Survey is included as Appendices D and E of this Report

Figure 5-1: Numbers of Survey Respondents (279 Total)

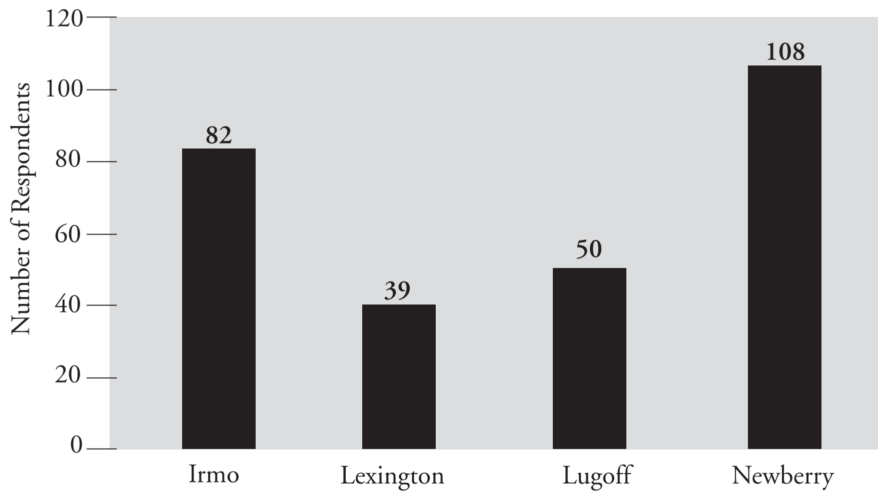


Figure 5-1 illustrates the total number of Wednesday survey respondents from each of the four areas serviced by SmartRide. The total numbers of riders reported by the daily head count on these four Wednesdays were 307. Thus, these survey responses represent the opinion of 90.1% of the riders.

WEDNESDAY SURVEY RESPONSES

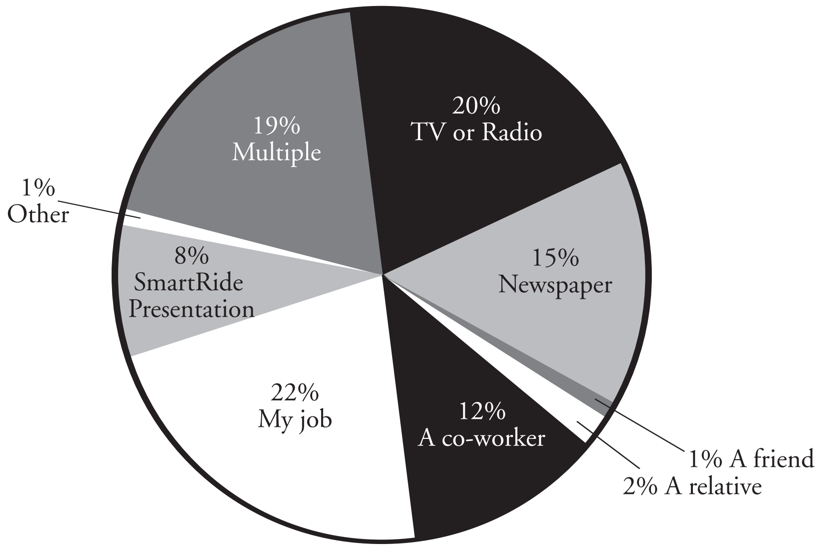
QUESTION 1

Question 1 of this survey asks the riders to report the means of communication by which they first heard about the SmartRide Project. The possible responses included:

- I attended a SmartRide Presentation.
- A co-worker informed me.
- A relative informed me.
- A friend informed me.
- I heard about it from a TV or radio news report.
- I read about it in the newspaper.
- My job sent a memo or e-mail about it.

The intent of this question was to demonstrate the most effective means of spreading information about the SmartRide Project. As shown in Figure 5-2, many of the respondents heard about the SmartRide project from multiple sources, suggesting that the news of this project was widespread. However, it should also be noted that several of the riders commented that they were concerned about the lack of publicity for the project.

Figure 5-2: Ways of Hearing about the SmartRide Project



As shown in the chart, the most common responses were "TV or radio," "newspaper," "my job," and "multiple." The "multiple" category particularly included those who heard about SmartRide at work, as those individuals may have had for example, a memo or e-mail, a presentation, and co-workers providing information about SmartRide. Also, some individuals who heard about SmartRide at work had that exposure reinforced by coverage in the media. Responses in the "other" category were few, but included the Internet and SmartRide personnel.

Table 5-1 illustrates how the ways that riders heard about the SmartRide program changed over the course of the month. The number of those who heard about it from others remained fairly consistent. Notable, there was a gradual increase in the number of riders who had attended a SmartRide presentation. Also, there was a great increase between the first and the second weeks in the number of riders who heard about it through the media (TV or radio).

Table 5-1: Ways of Hearing About SmartRide By Week

	10/8/03	**10/15/03**	**10/22/03**	**10/29/03**
A co-worker	12.7%	6.7%	14.8%	13.6%
A friend	0.0%	0.0%	3.3%	1.2%
A relative	1.8%	2.7%	1.6%	2.5%
TV or Radio	10.9%	24.0%	23.0%	19.8%
SmartRide Presentation	3.6%	6.7%	8.2%	11.1%
Multiple	27.3%	20.0%	14.8%	13.6%
My job	27.3%	21.3%	19.7%	22.2%
Newspaper	14.5%	17.3%	14.8%	14.8%
Other	1.8%	1.3%	0.0%	1.2%

It should be noted that a few rider comments expressed concern that information about the project was not widespread. Such comments included:

- “Advertise more! I think there are a lot of people who don't know about SmartRide.”

- “The newspaper needs to publish pick-up locations and times so that people will understand better.”

- “I think if more information was made available, then more riders could be found.”

QUESTION 2

Question 2 asks the respondents to identify how many days out of the past seven they have ridden the SmartRide bus. Responses, or course, were from one to five. This question is geared towards determining whether the use of the SmartRide service is likely to become a habit on most days of the week for commuters, or whether they will use the service infrequently. Table 5-2 breaks out the responses by percentages on this question. Note that on October 8, the SmartRide service had only been available for three days.

Table 5-2: Number of Days Riding SmartRide Out Of Seven

	10/8/03	**10/15/03**	**10/22/03**	**10/29/03**
1 Day	29.09%	10.67%	11.48%	11.36%
2 Days	34.55%	2.67%	13.11%	5.68%
3 Days	36.36%	25.33%	19.67%	21.59%
4 Days	0.00%	20.00%	16.39%	20.45%
5 Days	0.00%	41.33%	39.34%	40.91%

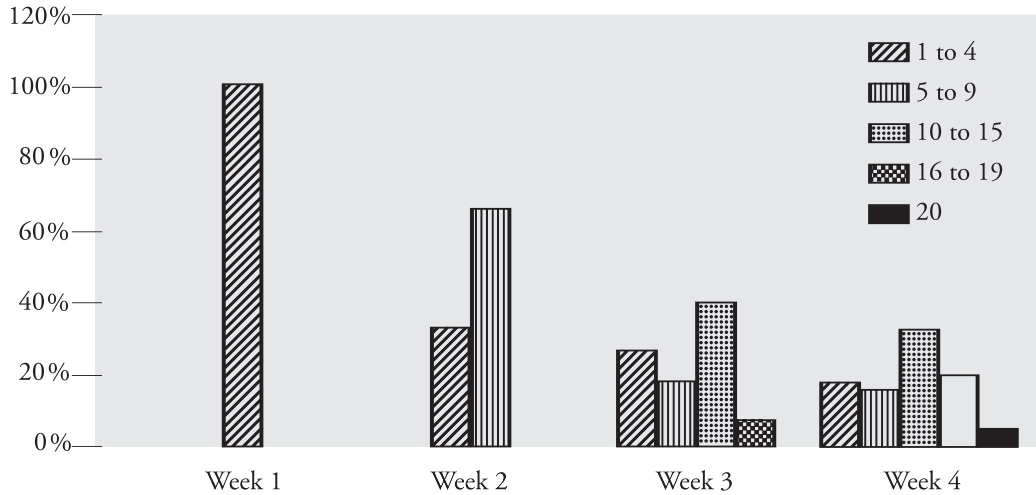
QUESTION 3

Question 3 asks how many total days in October 2003 did the individuals use the SmartRide service. While the opportunity was provided for respondents to give an exact number, the majority chose one of the ranges listed:

- 1 to 4
- 5 to 9
- 10 to 15
- 16 to 19
- 20

In order to better interpret this data, the responses must be separated by week. The intent of this question is to demonstrate that there was a core rider group that depended on SmartRide for daily commutes, and that there were new riders trying the service throughout October. Both populations are critical to the success of a service such as SmartRide. The responses are shown in Figure 5-3.

Figure 5-3: Total Days of Riding SmartRide



QUESTION 4

Question 4 asks riders to rate the convenience of the pick-up locations. These locations included the Lexington County Annex (added during the third week of operation), the Piggly Wiggly, and the SCDOT Park and Ride lot for the Lexington route; the Newberry Shopping Center, Gazebo parking lot, and O'Cain Advertising for the Newberry route; the Department of Motor Vehicles and Midlands Technical College for the Irmo route; and the Days Inn for the Lugoff route. The available responses to this question included, "Very Poor," "Poor," "Fair," "Good," and "Very Good."

Table 5-3: Ratings of Pick-Up Locations By Date

	10/8/03	10/15/03	10/22/03	10/29/03
Very Good	60.7%	60.5%	64.5%	75.6%
Good	32.1%	34.2%	32.3%	22.0%
Fair	5.4%	2.6%	1.6%	1.2%
Poor	0.0%	1.3%	0.0%	0.0%
Very Poor	0.0%	0.0%	0.0%	0.0%

As shown in table 5-3, the general response to the parking arrangements was very positive, with the majority reporting "Very Good" and "Good." Table 5-4 breaks out survey responses according to specific SmartRide Pick up locations.

Table 5-4: Ratings of Pick-up Locations By Route

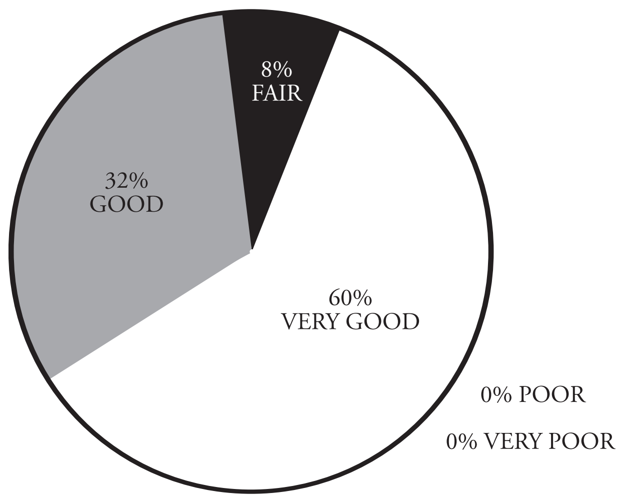
		10/8/03	10/15/03	10/22/03	10/29/03
IRMO	Very Good	45.5%	78.3%	76.9%	89.5%
	Good	50.0%	17.4%	15.4%	10.5%
	Fair	4.5%	1.0%	7.7%	0.0%
	Poor	none	none	none	none
	Very Poor	none	none	none	none
LEXINGTON	Very Good	70.0%	54.5%	64.5%	100.0%
	Good	10.0%	36.4%	32.3%	none
	Fair	20.0%	1.0%	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none
LUGOFF	Very Good	77.8%	54.5%	31.3%	50.0%
	Good	22.2%	36.4%	68.8%	42.9%
	Fair	none	none	none	7.1%
	Poor	none	9.1%	none	none
	Very Poor	none	none	none	none
NEWBERRY	Very Good	71.4%	53.3%	77.8%	75.7%
	Good	28.6%	46.7%	22.2%	24.3%
	Fair	none	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none

There were some comments regarding the pick-up locations. The most frequently occurring were those such as:

- “Please add a stop on Clemson Road!”
- “Add a Camden pick-up -- it is 15-20 minute trip to get to the stop” (from Lugoff)

A later question in the survey asks riders to report whether they have in the past lived in an area where they used transit services at least once a week to get to work. In Figure 5-4, these responses were separated from the general pool and compared. The purpose of performing this analysis was to determine whether there was any difference in the quality ratings given to SmartRide by those respondents who might have some basis for comparison with another transit system. It should be noted that 72 respondents (26%) reported having used other transit systems previously. Their responses are shown in Figure 5-4. While the vast majority still rated the locations as being "Very Good," a slightly higher percentage (8%) than the general survey population chose the rating of "Fair."

Figure 5-4: Pick-Up Locations as Rated by Those Who Had Used Other Transit Systems



QUESTION 5

Question 5 asks riders to rate the suitability of the parking areas, and mentions access, congestion, safety, security, number of spaces, etc. The available responses to this question included, "Very Poor," "Poor," "Fair," "Good," and "Very Good." Overall, the response to the parking arrangements was very positive, particularly considering their temporary nature. The Irmo parking received high ratings all four weeks, while the Lugoff parking received lower marks. The Lugoff riders did have some comments, such as:

- "The stop is congested in the afternoons."
- "The stop is not well–lit."

Figure 5-5: Effectiveness of Parking at Pick-up Locations

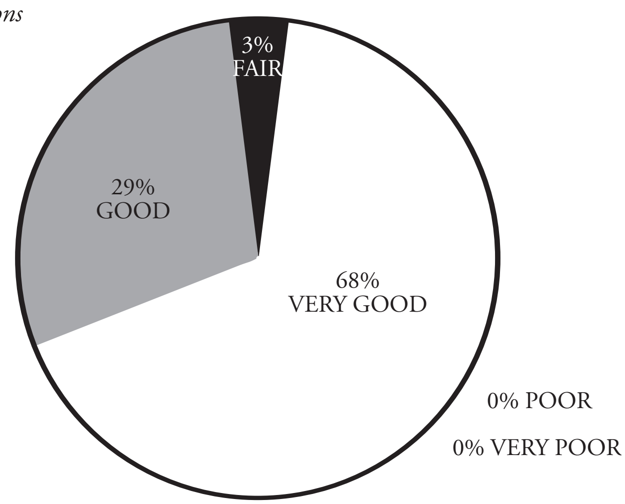
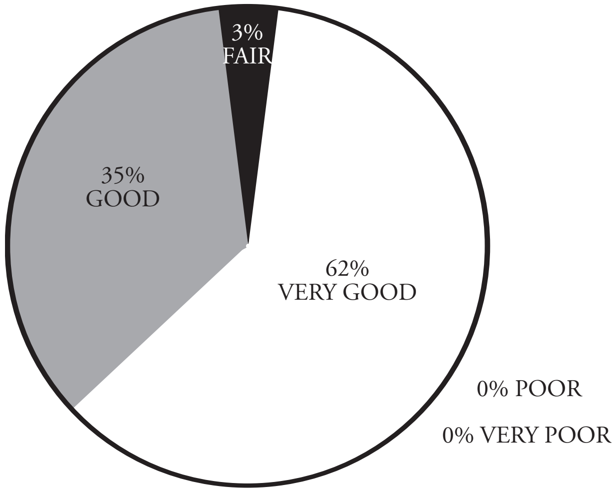


Table 5-5: Ratings of Parking by Route

		10/8/03	10/15/03	10/22/03	10/29/03
IRMO	Very Good	72.7%	87.0%	76.9%	94.4%
	Good	27.3%	13.0%	23.1%	5.6%
	Fair	none	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none
LEXINGTON	Very Good	90.0%	72.7%	60.0%	100.0%
	Good	10.0%	27.3%	20.0%	none
	Fair	none	none	20.0%	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none
LUGOFF	Very Good	44.4%	54.5%	50.0%	42.9%
	Good	33.3%	27.3%	31.3%	42.9%
	Fair	22.2%	18.2%	18.8%	7.1%
	Poor	none	none	none	7.1%
	Very Poor	none	none	none	none
NEWBERRY	Very Good	71.4%	46.7%	70.4%	59.5%
	Good	28.6%	53.3%	29.6%	40.5%
	Fair	none	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none

Again, these responses of those who have used mass transit before were separated from the general pool and compared to it. The purpose of performing this analysis was to determine whether there was any difference in the quality ratings given to SmartRide by those respondents who might have some basis for comparison with another transit system. It should be noted that 72 survey responses (26% across all four weeks) reported previous use of other transit systems. Those responses are shown in Figure 5-6.

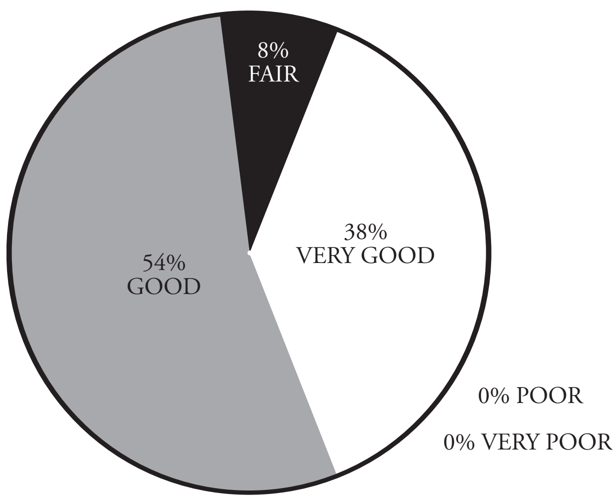
Figure 5-6: Parking as Rated by Those Who Have Used Other Transit Services



QUESTION 6

Question 6 asks riders to rate the timeliness of the SmartRide service. The available responses to this question included, "Very Poor," "Poor," "Fair," "Good," and "Very Good." The issue of timeliness was very important with SmartRide, as with any mass transit system in general. Overall, the ratings for the timeliness of the SmartRide were good, as shown in Figure 5-7. Thirty-eight percent of riders rated timeliness as very good and fifty-four percent rated it as being good. Newberry and Irmo had lower ratings for timeliness overall than did Lexington and Lugoff, but there was a great deal of variation in ratings from week to week, which could have been due to the impact of individual incidents. Some incidents of lateness are unavoidable when dealing with city traffic. However, timeliness was the weakest area for the service and may certainly affect ridership in the future if it cannot be improved.

Figure 5-7: Rating of Timeliness of the SmartRide Service



There were some rider comments on the subject of timeliness. Examples are:

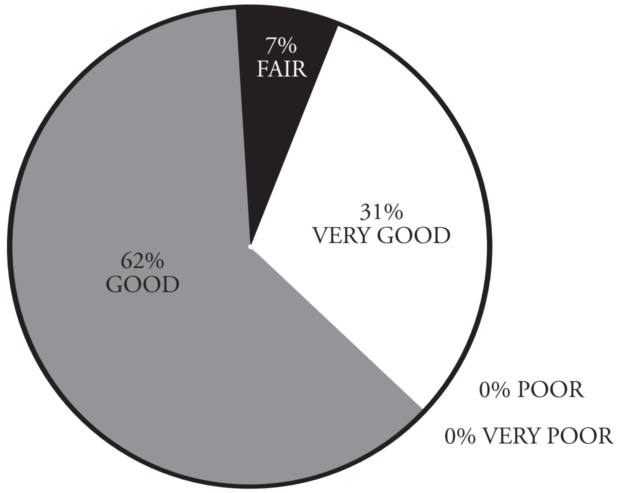
- "Afternoon pick-ups are running ten or more minutes late."
- "Timeliness is very good in A.M., fair in P.M."

Table 5-6: Ratings of Timeliness By Route

		10/8/03	10/15/03	10/22/03	10/29/03
IRMO	**Very Good**	36.4%	34.8%	23.1%	36.8%
	Good	50.0%	56.5%	76.9%	52.6%
	Fair	13.6%	8.7%	none	10.5%
	Poor	none	none	none	none
	Very Poor	none	none	none	none
LEXINGTON	**Very Good**	40.0%	30.0%	40.0%	45.5%
	Good	40.0%	60.0%	60.0%	54.5%
	Fair	10.0%	10.0%	none	none
	Poor	none	none	none	none
	Very Poor	10.0%	none	none	none
LUGOFF	**Very Good**	50.0%	72.7%	37.5%	50.0%
	Good	50.0%	18.2%	62.5%	50.0%
	Fair	none	9.1%	none	none
	Poor	none	none	none	7.1%
	Very Poor	none	none	none	none
NEWBERRY	**Very Good**	57.1%	26.7%	37.0%	32.4%
	Good	35.7%	63.3%	51.9%	56.8%
	Fair	7.1%	10.0%	11.1%	10.8%
	Poor	none	none	none	none
	Very Poor	none	none	none	none

Again, these responses of those who have used mass transit before were separated from the general pool and compared to it. The purpose of performing this analysis was to determine whether there was any difference in the quality ratings given to SmartRide by those respondents who might have some basis for comparison with another transit system. Those responses are shown in Figure 5-8.

Figure 5-8: Timeliness As Rated By Those Who Have Used Other Forms of Mass Transit



QUESTION 7

Question 7 asks participants to rate the safety of the SmartRide service. The available responses to this question included, "Very Poor," "Poor," "Fair," "Good," and "Very Good." The majority of riders (58%) felt that the safety of the service was very good. Again, there was variation from week to week and from one route to another, as shown in table 5-7. Newberry riders were the most consistent about giving the service high marks for safety, but interestingly, Lexington was highest for weeks one and two, but dropped sharply in weeks three and four. Some examples of comments regarding safety are:

- "No seatbelts"
- "Drivers go out of their way to make sure we are safe."
- "We should be picked up at the same location as the drop-off. It is not safe to cross Bull St. in the morning."

Table 5-7: Ratings of SmartRide Service Safety by Route

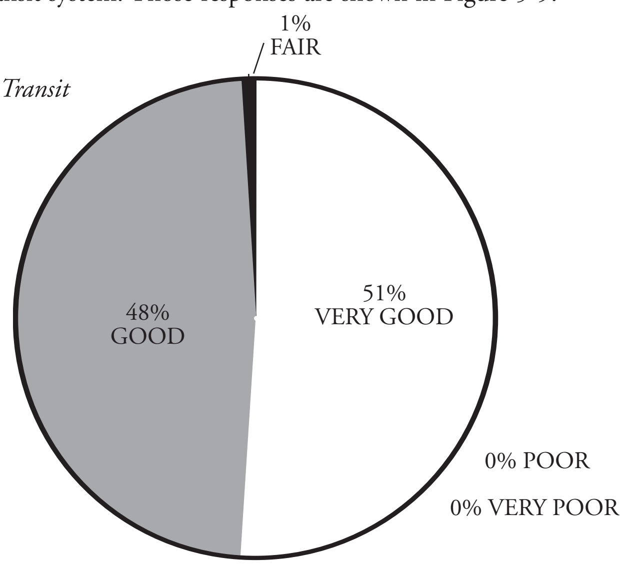
		10/8/03	10/15/03	10/22/03	10/29/03
IRMO	**Very Good**	36.4%	65.2%	38.5%	84.2%
	Good	54.5%	34.8%	61.5%	15.8%
	Fair	9.1%	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none
LEXINGTON	**Very Good**	90.0%	72.7%	40.0%	46.2%
	Good	10.0%	27.3%	60.0%	53.8%
	Fair	none	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none

Table 5-7 (continued)

		10/8/03	10/15/03	10/22/03	10/29/03
LUGOFF	Very Good	44.4%	63.6%	37.5%	28.6%
	Good	55.6%	36.4%	62.5%	64.3%
	Fair	none	9.1%	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	7.1%
NEWBERRY	Very Good	71.4%	51.7%	70.4%	59.5%
	Good	28.6%	48.3%	29.6%	37.8%
	Fair	none	none	none	2.7%
	Poor	none	none	none	none
	Very Poor	none	none	none	none

Again, these responses of those who have used mass transit before were separated from the general pool and compared to it. The purpose of performing this analysis was to determine whether there was any difference in the quality ratings given to SmartRide by those respondents who might have some basis for comparison with another transit system. Those responses are shown in Figure 5-9.

Figure 5-9: Safety of SmartRide as Rated by Those Who Have Used Other Forms of Mass Transit



QUESTION 8

Question 8 asks participants of the SmartRide Project to rate the bus drivers and SCDOT staff for their courteous and friendly service. The available responses to this question included, “Very Poor,” “Poor,” “Fair,” “Good,” and “Very Good.” Responses to this question were particularly positive overall. Respondents gave the drivers and staff an 82% “very good” rating, as shown in figure 8A. Examples of comments regarding the drivers and staff include:

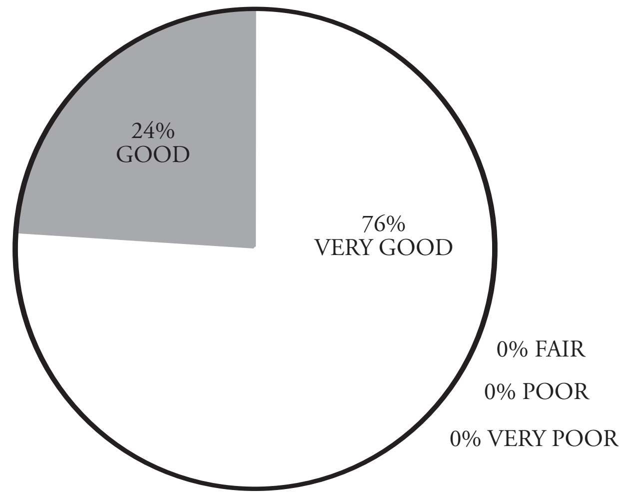
- “Drivers go out of their way to make sure we are safe.”
- “…drivers are very professional and courteous.”
- “Complaint w/ driver, week of 27th.” (Lugoff route)

Table 5-8: Ratings of Drivers and SmartRide Staff by Route

		10/8/03	10/15/03	10/22/03	10/29/03
IRMO	**Very Good**	81.8%	87.0%	69.2%	100%
	Good	18.2%	13.0%	30.8%	none
	Fair	none	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none
LEXINGTON	**Very Good**	90.0%	60.0%	80.0%	81.8%
	Good	10.0%	40.0%	20.0%	18.2%
	Fair	none	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none
LUGOFF	**Very Good**	100.0%	90.0%	93.8%	64.3%
	Good	none	9.1%	6.3%	35.7%
	Fair	none	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	none
NEWBERRY	**Very Good**	78.6%	83.3%	81.5%	75.7%
	Good	21.4%	16.7%	18.5%	21.6%
	Fair	none	none	none	none
	Poor	none	none	none	none
	Very Poor	none	none	none	2.7%

Again, these responses of those who have used mass transit before were separated from the general pool and compared to it. The purpose of performing this analysis was to determine whether there was any difference in the quality ratings given to SmartRide by those respondents who might have some basis for comparison with another transit system. Those responses are shown in Figure 5-11.

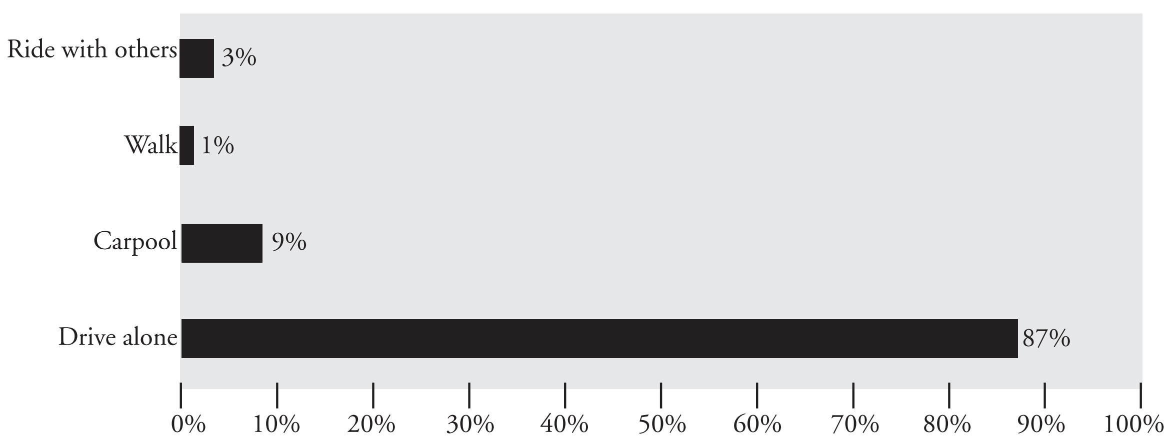
Figure 5-11: Service of Staff and Drivers as Rated by Those Who Used Other Forms of Mass Transit



QUESTION 9

Question 9 asks survey participants to report the method of transportation that they usually use to commute to work. Possible responses were, “drive alone,” “carpool,” “vanpool,” “bicycle,” “walk,” “public transportation,” “taxi service,” “motorcycle,” “telecommute,” “ride with others (not a formal carpool),” and “other.” Figure 5-12 graphs commute type responses. By far, the vast majority of riders (87%) usually drove alone. The respondents did not select the choices not shown on the chart. This is a critical survey finding because it shows that the majority of SmartRide users generally drove to work alone.

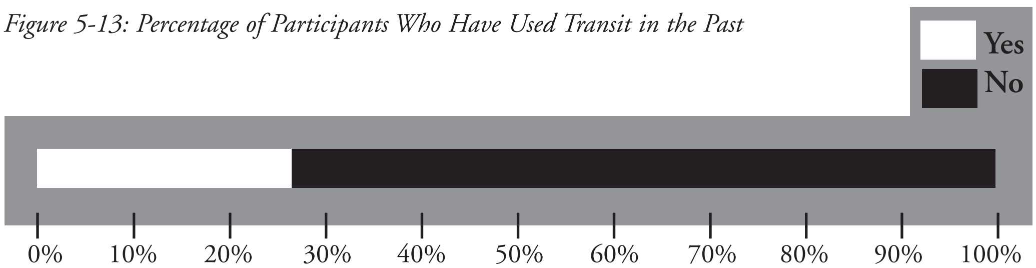
Figure 5-12: Usual Means of Transportation



QUESTION 10

The final question of the Wednesday Survey asks commuters to report whether they, at any time in the past, lived in another city and used a transit service to travel to work, school, or appointments at least once a week. Some of the previous figures concerning the quality of service ratings made use of this data to compare how riders who had used mass transit before rated the SmartRide service. Also, it is important make sure that the service attracts riders who may have never have had the opportunity to use mass transit before. Some of these individuals may have some preconceived ideas about the function of mass transit in a community. It is important to be sure that the marketing strategies being used convey the intent, function, and utility of commuter transit services. Here, 26% of riders had used some form of mass transit regularly in the past.

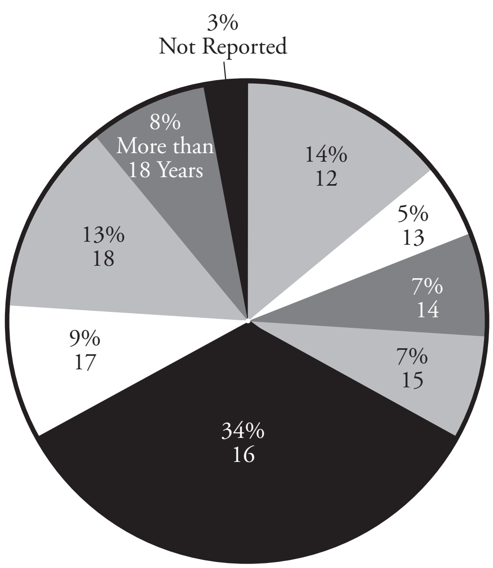
Figure 5-13: Percentage of Participants Who Have Used Transit in the Past



DEMOGRAPHIC DATA

The Wednesday survey included some questions of a more personal nature that were intended for use in creating a profile of the SmartRide commuters. This information is important because it allows one to understand the target interest group for this service and promote it accordingly.
The first question asks riders to report their education level. Figure 5-14 gives the response percentages for educational levels.

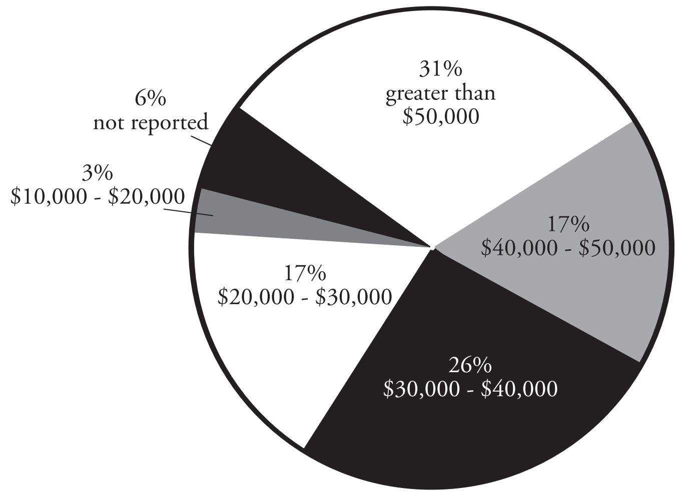
Figure 5-14: Education levels of SmartRide Commuters



As shown in figure eleven, the majority (34%) of SmartRiders report four years of education beyond high school. Although options were available to select “first through eighth grade” and “9th to 11th grade,” no respondents selected those. However, three percent of respondents declined or neglected to answer this question. Overall, the population making use of the SmartRide service has a high level of education.

The next question asks respondents to report their income level. Figure 5-15 gives participants’ responses to this question.

Figure 5-15: Income levels of SmartRide Participants

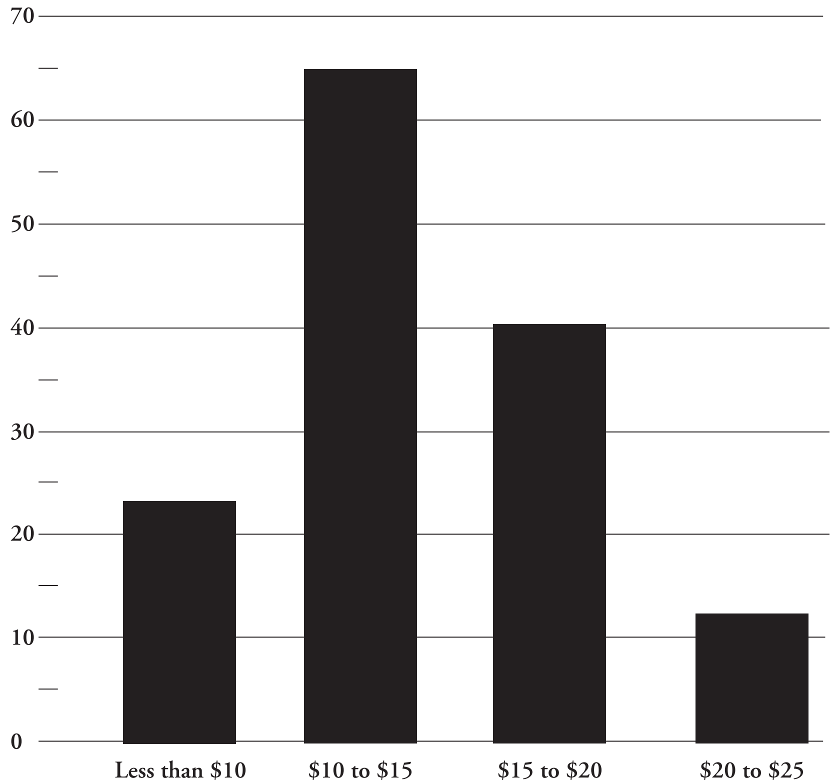


Thus, the majority of SmartRide participants have average or above average salaries. According to the South Carolina Employment Security Commission, the percapita personal income for Richland County for 2001 was $29,211.

After two weeks of operating, an addition section was added to the weekly survey that focused on the benefit of the SmartRide activities and what a reasonable fare would be for a similar type bus transportation service. Question Four from the added survey section reads: “Considering the overall benefit of the SmartRide transportation project, what fare is reasonable to ride the bus to and from work on a weekly basis?”

Figure 5-16 shows the responses from SmartRide passengers to Question Four from the added survey section.

Figure 5-16: Reported Reasonable Fare for SmartRide



The majority of the survey responses indicated that a fare of $10.00 to $15.00 would be most reasonable for the SmartRide services. The remaining questions from the added survey section can be viewed in Appendix E.

SUMMARY OF WEEKLY SURVEY SECTION

SmartRide participants were generally very cooperative in providing information that facilitated the objectives of the Project. The various information dissemination methods were all important to a degree in helping residents and workers decide about their participation in the four-week commuter bus service. The responses were generally favorable; however, there were indications and recommendations for improvements with the service. The weekly surveys revealed that 87% of the responses were from participants who usually drive to work alone. Survey participants included those who have used mass transit services in the past and those who have not. There was also a good variety in educational and income levels among SmartRide participants. The following table shows the places of employment listed by those who completed surveys during the SmartRide Project.

	Week 1	Week 2	Week 3	Week 4
Agrist P Credit Bank	1	1	1	1
American Red Cross				1
Baker, Ravenel & Bender	1	1		1
Becknell Cleaners			1	
Budget & Control Board	2	6	3	3
City of Columbia			1	
Columbia Museum of Art	1	1	1	1
Comptroller General	3	3	3	2
County Health Dept.	1	1		
Customer Service Business Office	1			
DHHS	2	2	2	4
DNR	1			
SCDPRT	2	1	1	1
Ellis, Lawhorne & Sims		1	1	1
Federal Government	1			
Fed. Highway Administration		1		
First Am. Title Ins.			1	
1st Citizens Bank		2	1	
Gen. Services Facilities Management	1			
Goldsmith Theodore		1		
Governor's Office	1	2	1	4
Gregory G. Williams, Esq.	1	1	1	1
Haynsworth, Sinkler, Boyd	1	1	1	1
Hussey, Gay, Bell & DeYoung		1	1	
Internal Operations				1
Nexsen, Pruet, Jacobs & Pollard		1		
Olive Garden		1		
Richland School District 1			1	
SC Attorney General's Office			1	2
SC Dept. of Commerce				2
SC Dept. of Revenue		1		
Employment Security Commission			1	2
SC Jobs Economic Development		1		
SC Lutheran Synod		1		
SCANA	3	2	4	5
SCDHEC	15	22	9	14
SCDOT	3	4	6	11
SCE&G		1	1	
Retirement Systems	1		1	
Riggs, Inc	1			
SouthTrust Mtg.		1	1	2
Dept. of Education	1	1	1	2
State Gov.		1		1
Supreme Court			1	
Synovas Securities				1
The Box Lunch Co.	1		1	
Treasurer's Office		1		
USC	1	4	6	10
USDA	1	1	3	3
VA	1		1	

SECTION 6

Comments and Inquiries from Residents

The SmartRide Research Project obviously gave many individuals the opportunity to comment on the transit demonstration effort and on transportation issues in general in South Carolina. Written comments were submitted via the SmartRide web page as well as through the general interest and the weekly project surveys. Most of the comments and questions received pertained to the service and scheduling details of the SmartRide buses. Some questions and comment involved regional transit concerns, community issues or broader policy issues that could not be addressed within the limited timeframe and the limited scope of the SmartRide Research Project.

Changed Opinion of Mass Transit Service

One rider expressed her appreciation for the SmartRide Project and stated that the experience of riding the SmartRide bus has definitely changed her opinion of mass transit. This type of change in opinion could represent a positive by-product of consistent efforts to establish and improve transit services in general and commuter-focused transit services in the State.

Frustration With Office Parking Reimbursement Policy

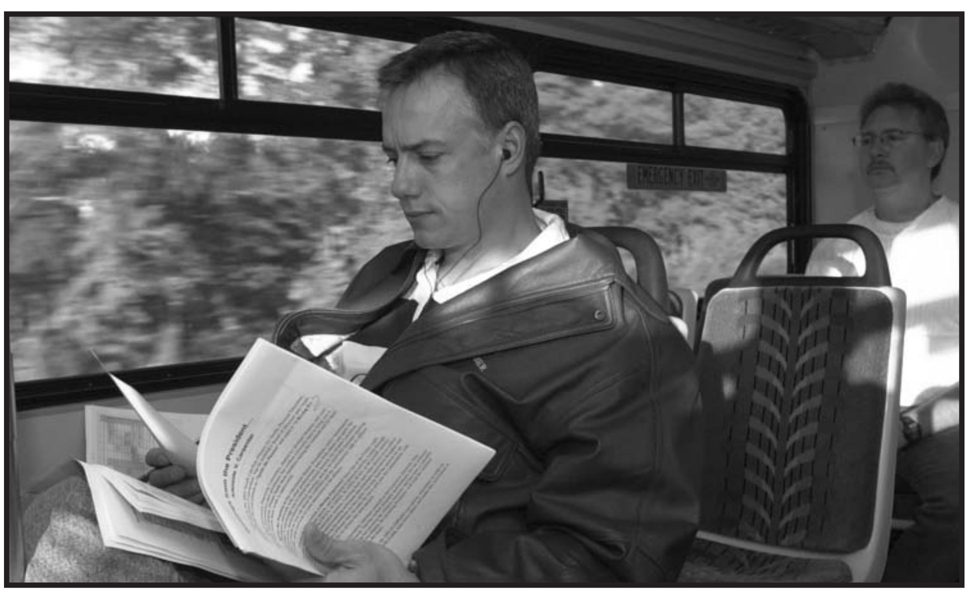
During the early part of the SmartRide Project, a potential SmartRide passenger sent an e-mail message that explain the writer's change of opinion about using the transit service during the project period. According to the e-mail message, the writer's employer was offering a reimbursement of paid parking fees for employees who could provide proof that they participated in the SmartRide Research Project for all 20 days of operation. Of course, SCDOT could not provide this type of verification. Future efforts at commuter-focused transit services may need to include recommendations to help project partners develop practical incentives to encourage greater participation of its employees.

SmartRide Is A Great Idea!

One rider took the time to send an e-mail message through the SmartRide website to express her very positive thoughts about the Project. This rider also indicated that she intended to use the services in the future, if the fares were reasonable.

More Information Please!

There were many requests for information regarding operational aspects of the SmartRide Project, such as who was eligible to participate, where the pickup locations were, bus pickup schedules and security at the parking facilities. The SCDOT Mass Transit Office was required to employ the services of a temporary staffing agency to handle to increased volume of telephone inquiries regarding the SmartRide Research Project during the month of October of 2003. The SmartRide web site also delivered a number of informational requests about the project. For the month of October the level of interest as expressed through telephone calls and e-mail messages was extremely high. The Project generated 25-plus telephone calls daily during the early part of October 2003.



SmartRide was a smart choice for those seeking to gain extra time to read, study or work during part of the morning commute.

A Very Good Experience

After a full week of riding the commuter bus, a SmartRide Passenger expressed that it had been a very good experience thus far. The participant also expressed the desire that the local transit authority would continue the service after the project period.

A Very Good And Needed Service

The research project has been described as being a very good and needed service in the region. Another e-mail writer stated that she/he could not believe how easy it was to use the SmartRide bus, and stated that she/he is going to spread the word about the Project to everyone she/he knew.

Professionalism of SmartRide Drivers Noted

Several SmartRide participants indicated that they appreciated the professional and courteous demeanor of the bus drivers. Many of the SmartRide passengers were not accustomed to mass transit services and the drivers were very patient and informative in helping everyone have a safe and enjoyable experience. One driver was noted as having been keenly perceptive in anticipating a motorist who was determined to run through a red signal light. The bus driver is credited with helping to avoid a collision. There are other accounts of excellent driver behavior during the SmartRide Project. The SmartRide Development Committee knew that have passenger-friendly drivers would be a very critical factor in the success of the Project. The partnership between SCDOT and the Central Midlands RTA represented another beneficial and successful aspect of the SmartRide Research Project.

Extraordinary Service of SCDOT Staff Applauded

The efforts of a SCDOT staff person, who helped to bridge the gap with project information and pickup times on the first day of SmartRide services, was noted by a passenger. The passenger recognized that everything would not necessarily run as planned in executing a project such as SmartRide. The passenger called the Mass Transit office after waiting for the evening bus for an extended period of time. The generous and professional SCDOT employee provided transportation for the passenger after the SmartRide bus apparently did not show up at the published time. A guaranteed ride home was discussed during the planning stages of the Project but was not adopted as part of the marketing strategy for the operation.

Safety Concerns

While the SmartRide drivers received high marks overall, there were a few complaints by e-mail and through comments on the weekly surveys that the bus driver of one of the service areas drove too fast and followed too closely to other vehicles. These reports were always reported to the management of the transit agency so the proper instructions and actions could be taken. Actual safety and the perception of being safe were key priorities in carrying out the SmartRide Project.

Service Adjustments Needed

A rider of the SmartRide bus suggested that a separate bus be used to carry commuters to work destinations that were not clustered near to the downtown vicinity. The writer of this suggestion noted the extra time required for the bus to circulate around to drop off locations that were not close to the office and business locations near the Capital Building in Columbia. An intermediate service run was also recommended, noting that the first morning run was too early and the second run was too late. While this writer indicated that she/he liked riding the SmartRide bus, the service would have to be made more convenient before she/he will pay for it.

This is important feedback from a SmartRide passenger that would be beneficial in considering on-going commuter-focused transit services. Commuter-focused transit still requires an exchange of some convenience for personal and shared benefits by the users.

Suggestion To Market Through Alternative Media Outlets

One SmartRide participant suggested that the Project expand its marketing vehicles to include Public Radio. This passenger felt that the word about SmartRide was not getting out adequately and that the public radio broadcasts would reach segments of the population that choose not to receive their information from popular media sources in the Midlands.

Looking Beyond The Research Period

Some e-mail inquiries appeared to assume that the October operational phase of the SmartRide Project was an introduction to an on-going commuter-focused transit operation after October 2003. Several residents inquired about the cost of the service once the demonstration period ended. Requests of this nature could be interpreted as interest in a more permanent commuter-focused transit service in the communities served by the SmartRide Research Project.

Commuter Transit Service Helps Improve Worker Production

One SmartRide participant stated that she has less stress when she takes the SmartRide bus. The writer further explained that workers who ride the bus are ready for work when they arrive and are more productive.

Relaxing Ride, Stress-Free Arrivals And Improved Dispositions

An e-mail message sent by a SmartRide participant who states that the Projects was wonderful and very relaxing. This person credits the use of the SmartRide bus for arriving to work stress-free and returning home with a more cheerful attitude.

Commuter Trips Involving More Than One Region

One e-mail message requested information on possible interregional transit connections with the SmartRide Project. The ability to provide interconnected commuter transit service over several different communities is an excellent goal. The type of service would be a little more complex than the service offered by the SmartRide Project, and would require the participation of the different transit providers that operate in each of the affected service areas. This issue represents one of the many excellent transportation issues raised by residents who showed interest in the SmartRide Research Project.

Interstate Commuters

One e-mail message was concerning interested commuters traveling from north of Columbia on Interstate 77. The Four interstate highways (I-20, I-26, I-77 and I-126) in and around the Midlands represent much of the traffic that comes in the area during rush hour periods. These highways should be part of any evaluation to consider on-going commuter-focused transit services. However, because of limited focus, resources and time, the SmartRide Project could not extend services to this region during the operational period.

Requests For Expanded SmartRide Services

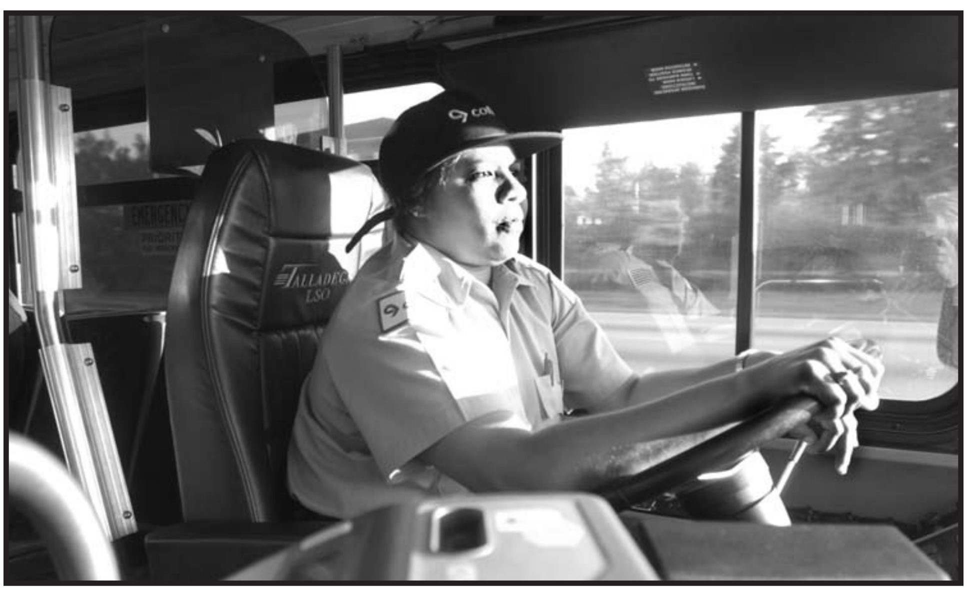
Many e-mail messages indicated that greater participation could be attained if the SmartRide buses also operated in other communities and made specific drop-offs at an expanded number of locations. A number of requests via telephone, e-mail, survey comments personal conversations indicated potential interest in commuter-focused transit by workers in Batesburg-Leesville, Bishopville, Blythewood, Camden, Chester, Elgin, Hopkins, Northeast Columbia, Pontiac and Winnsboro to name a few. The SmartRide Research Project, with its limited geographic focus, could not explore the potential interest in all of the communities that were brought to the attention of SCDOT staff. The decision to actually provide commuter transit services in any of the communities would generally be made by a regional transit agency after an evaluation or feasibility study has been completed.

Public Transportation For Everyone

One e-mail writer cited the need to improve mass transit services for all citizens and not just seasonal efforts to accommodate tourism in the State. The writer also recognized that "maturing" residents may find driving conditions more of a challenge and will need to have improved access to transit services. The message concludes with an appeal for state funds to promote transit and transit educational initiatives.

Section Summary

These messages represent a few of the many that were sent to SCDOT or communicated to SCDOT staff regarding the SmartRide Research Project. Positive coverage by the local media also helped to get the message out about the Project and generated additional inquiries concerning the time-limited commuter transit services. The commuter-focused efforts of the SmartRide Project helped to encourage many to experience mass transit services for the first time. Many who could not ride the SmartRide bus due to service area limitations still expressed their interest in the service and their desire to see it expanded into other areas. The positive and critical comments have all been beneficial in encouraging the SmartRide effort and identifying opportunities to improve mass transit services in South Carolina.



The efforts of professional drivers were critical in promoting the SmartRide Research Project. These ambassodors of the project were often the first and last opportunity to provide a positive experience for SmartRide passengers.

SECTION 7

Project Observations and Recommendations

The outcome of the SmartRide Research Project demonstrated that individuals who have personal transportation would park their vehicles to use a transit service that is geared to meet the needs of commuters. An average of 68 persons made repeated trips on the SmartRide buses over the 20 days of operation during October of 2003.

The interest in the commuter focused transit service was demonstrated through a great number of telephone calls and e-mail messages received by SCDOT staff regarding the SmartRide Project. A more meaningful demonstration of interest was the fact that many residents rode the SmartRide buses and indicated the desire that the service continue beyond the research period. Other residents who did not participate in the SmartRide Project indicated that they would like to do so but due to limitations in communities served during the project period, they could not. Several of the bus runs showed the potential for increasing rider participation.

Cost savings and convenience arose as primary factors for participants who expressed interest in the SmartRide Project. Any subsequent study that examines the performance numbers from this Project must consider the fare-free factor of the project and how the level of participation may change based on the inclusion of fares.

The following are a number of observations made regarding the SmartRide Research Project:

Project Concept

1. The SmartRide name and logo quickly became associated with SCDOT's effort to get commuters to leave their vehicles and take the transit bus to work. Future efforts at commuter-focused transit in the State may benefit from employing the SmartRide name, which is recognized by many because of the October 2003 project.

2. The SmartRide Research Project was presented as an effort that could benefit the community at large (creating more options for commuters, possibly reducing traffic congestion, aiding in efforts to improve air quality, etc.). This gave the project broader appeal than simply having a transportation or transit focus only.

Team Building and Partnerships

3. Many of the essential facilities and items needed for the project to be carried out were beyond the control of SCDOT. This made partnerships and agreements with other entities in the community vital and beneficial. Team building efforts done early during the project helped in securing project infrastructure in a timely manner.

4. The participation in the Project by staff from other offices and agencies can bring in a different focus on the project that could help improve activities such as more effective marketing strategies, safer and more convenient pick up and drop off locations, and the identification of specific project benefits.

Project Infrastructure

5. The selection of pick up locations for the Project was affected by the wider turning ratio of the vehicles used, the consideration of safe egress of the transit bus from the parking area into the flow of traffic, and the limitation of time in communicating with property owners.

Project Operation

6. With a daily average of 68 persons a day, the SmartRide Research Project was successful in getting a number of individuals to leave their motor vehicles and ride the transit bus into the downtown Columbia area to their work locations. The commuter-focused details and cost-free participation of the operation may have been factors in dispelling the assumption that commuters in the region would not leave their vehicles to ride to work on a transit bus.

7. A sustained focus on the needs of the commuters and the efforts that give them a sense of appreciation may help to attract greater passenger participation in a commuter-focused transit operation.

Surveys

8. A relatively low percentage of project participants indicated that they attended one of the SmartRide presentations (3.6%). However, the information was shared by employees who did attend a presentation, with other co-workers who eventually became riders on the SmartRide bus. Thus, the formal and informal communication opportunities affected project participation.

Comments from Residents

9. The SmartRide Research Project introduced many residents to an established yet innovative and effective approach to commuter transportation. Based on comments from residents, the SmartRide Research Project was a positive presentation of the possibilities of mass transit service.

10. Some riders and SCDOT staff reported that SmartRide transit service has the potential of improving employment conditions by providing greater access to job opportunities for rural residents in the more plentiful Columbia-area job market.

Service Costs and Fares

11. Most SmartRide survey participants indicated that a reasonable fare for the service would be between 10.00 to $15.00 per week. The number of survey respondents decreased significantly as the proposed fare range increased to the range of $20.00 to $25.00 per week.

The on-going role of SCDOT in promoting commuter transit service

12. Commuter transit services could be facilitated by increased partnering and information exchange among existing transit providers. Specifically, the establishment of transit transfer centers or locations to improve connectivity and services for passengers wishing to commute across transit service regional boundaries.

SMARTRIDE RESEARCH PROJECT RECOMMENDATIONS

1. Make commuter transit issues a meaningful part of transportation development in the State by establishing and implementing transit factors to be considered at the pre-construction level of all projects.

2. Explore the feasibility of establishing a funding program from existing state funds to support commuter-focused transit activities. This proposed funding program could carry a common commuter transit identity, such as “SmartRide,” to make it easily recognizable throughout the State.

3. Coordinate with community and regional level authorities for the launching of commuter-focused transit feasibility studies and pilot projects, like SmartRide, in conjunction with statewide commuter transit educational efforts.

4. Promote the “Commuter Choice” transit fare incentive program.

APPENDIX A
Information-Sharing/Marketing Packet and Project Map

SCDOT SMARTRIDE project

The objective of the SCDOT SmartRide Research Project is to explore the feasibility of a mass transit commuter system in the Columbia Metropolitan Area. A successful SmartRide project will contribute to time savings and cost savings for consumers, decreased traffic congestion, increased highway safety, and a cleaner environment.

Now that's SMART!

SMART *for your time*

What would you do with a few extra minutes each day? Leave the driving to us, and you'll finally have time to read the newspaper, chat with a friend, or catch up on a few extra minutes of sleep.

SMART *for your wallet*

Add up the savings. Sign up for SmartRide, and for the month of October, your transportation costs are free!

SMART *for our highways*

Fewer cars on our highways decrease traffic congestion and increase highway safety. Let trained, professional drivers get you to work without the stress of driving in rush hour traffic.

SMART *for our environment*

With fewer cars on South Carolina's roads, we can also greatly reduce the amount of pollution in our air. A better environment means a better quality of life for us and for future generations.

By participating in the SmartRide Research Project, you are helping us work towards a better South Carolina.

Now that's SMART!

Need more information?

Want to sign up?

Call SCDOT's Mass Transit Office at

(803) 737-0831

Tell us you want to know more about SmartRide!

Route Times

Newberry Route

Times 1st	2nd	*Locations*
6:00	7:00	Newberry Shopping Center
6:20	7:20	Gazebo, Little Mountain
6:30	7:30	O'Cain Advertising, Chapin
7:00	8:05	Begin Dropoffs in Downtown
4:05	5:05	Begin Pickups in Downtown
4:52	5:57	O'Cain Advertising, Chapin
5:02	6:07	Gazebo, Little Mountain
5:22	6:27	Newberry Shopping Center

Irmo Route

Times 1st	2nd	*Locations*
6:25	7:25	DMV, Peak
6:40	7:40	Midlands Tech, Harbison
7:00	8:05	Begin Dropoffs in Downtown
4:05	5:05	Begin Pickups in Downtown
4:45	5:55	Midlands Tech, Harbison
5:00	6:10	DMV, Peak

Lexington Route

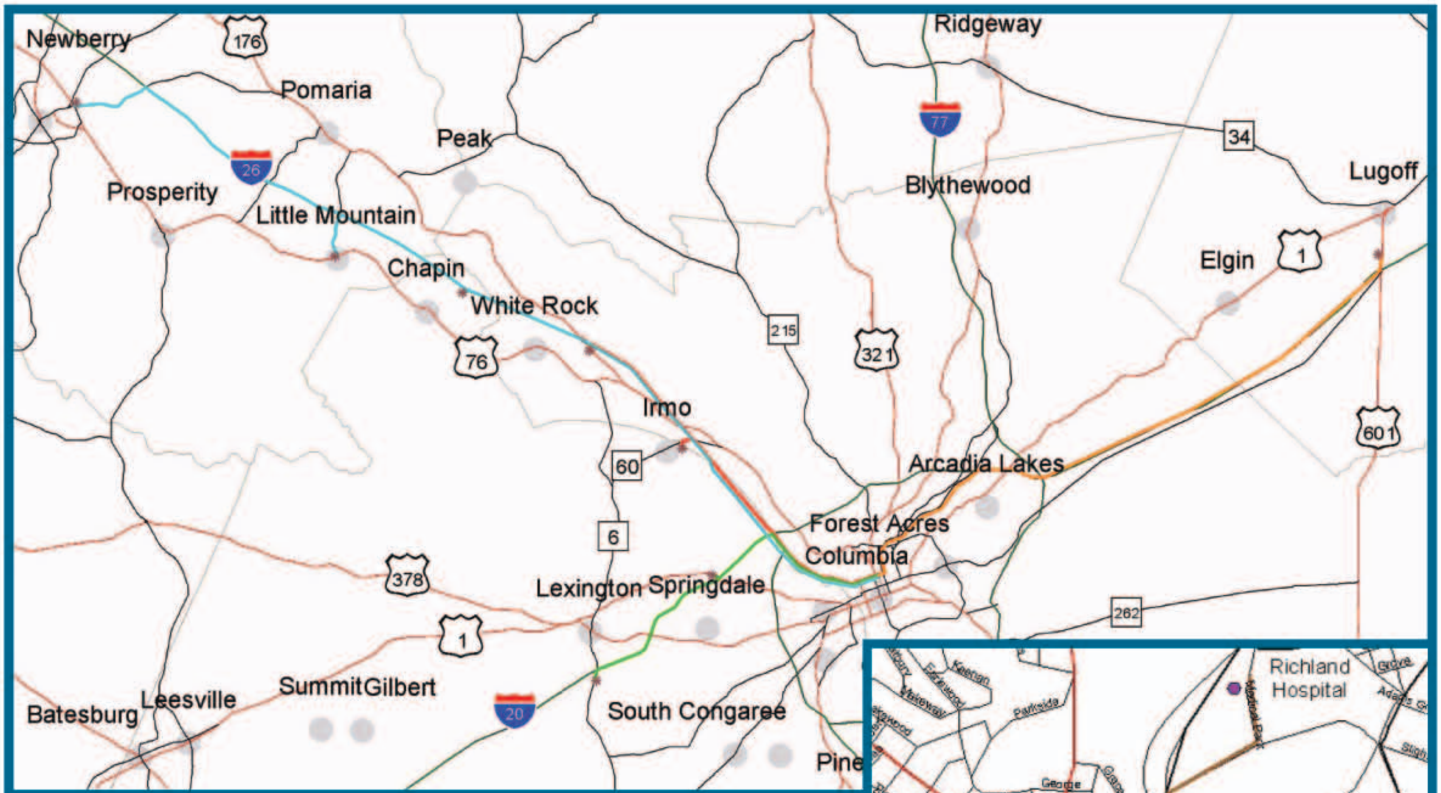
Times 1st	2nd	*Locations*
6:35	7:35	Piggly Wiggly, Hwy 6
6:45	7:45	Park&Ride, Hwy 378
7:00	8:05	Begin Dropoffs in Downtown
4:05	5:05	Begin Pickups in Downtown
4:42	5:47	Park&Ride, Hwy 378
4:52	5:57	Piggly Wiggly, Hwy 6

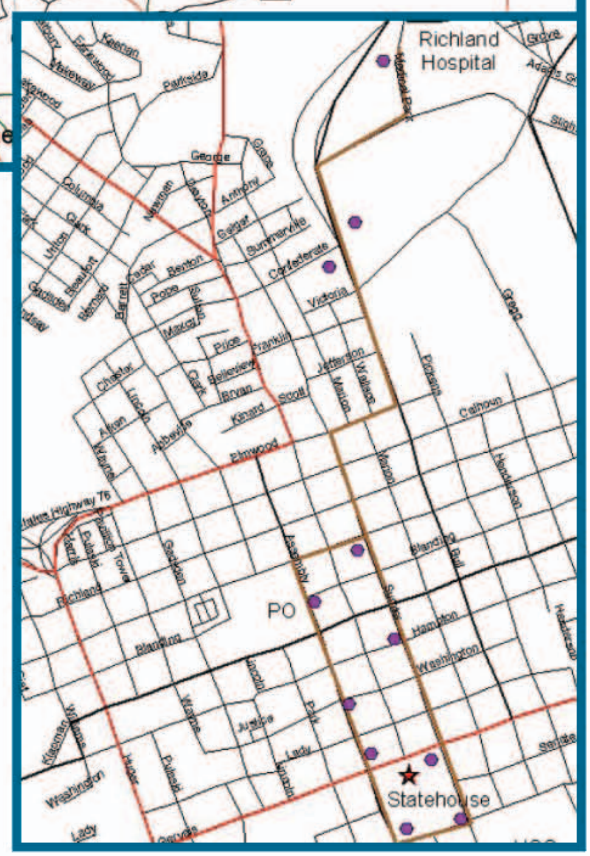
Lugoff Route

Times 1st	2nd	*Locations*
6:40	7:40	Days Inn
7:00	8:00	Begin Dropoffs in Downtown
4:05	5:05	Begin Pickups in Downtown
4:47	5:47	Days Inn

SCDOT
South Carolina Department of Transportation

YOU PARK. WE DRIVE. SMART.





The South Carolina Department of Transportation invites you to get on board with SmartRide!

We will be picking up at the following locations:

NEWBERRY	Newberry Plaza Shopping Center US 76, I-26 exit 76 The Gazebo, US 76, I-26 exit 85 O'Cain Advertising, Columbia Avenue, I-26 exit 91
IRMO	Peak DMV, I-26 exit 97 Midlands Technical College, SC 60, I-26 exit 102
LEXINGTON	Piggly Wiggly, SC 6, I-20 exit 55 SCDOT Park and Ride, US 378, I-20 exit 61
LUGOFF	Days Inn, US 601, I-20 exit 92

Our drop-off locations are conveniently located in downtown Columbia:

- Sumter at Laurel
- Sumter at Hampton
- Assembly at Gervais
- Assembly at Senate
- Sumter at Taylor
- Sumter at Senate
- Sumter at College
- Assembly at Washington
- Sumter at Pendleton
- Park at Pendleton
- Assembly at Blanding

SCDOT SMARTRIDE project

APPENDIX B

Project Parking Agreement

THE STATE OF SOUTH CAROLINA
COUNTY OF

PERMISSION FOR:
PARKING

Smart Ride – Park and ride pilot project

Whereas the South Carolina Department of Transportation is conducting a pilot program that will explore the feasibility of a mass transit commuter system in the Columbia Metropolitan Area in order to ease traffic congestion, improve highway safety, and contribute to a cleaner environment;

KNOW ALL MEN BY THESE PRESENTS, That I (or we)
do hereby grant to the South Carolina Department of Transportation temporary use of the parking lot for the period of time outlined below, if being understood and agreed that no right of way is being granted to the Department for this pilot project.

SPECIAL PROVISIONS:

Use of the spaces is limited to 6:00 AM until 7:00 PM, Monday through Friday beginning on October 6, 2003 and ending on October 31, 2003.

TO HAVE AND HOLD, all and singular, the said Permission hereinbefore granted, unto the said South Carolina Department of Transportation;

IN WITNESS WHEREOF, I (of we) have hereunto set my (or our) hand(s) and seal(s) this _____ day of _______________, in the year of our Lord, Two Thousand and Three.

Signed, sealed, and delivered in the presence of:

____ ____

1st Witness (L.S.)

____ ____

2nd Witness

THE STATE OF SOUTH CAROLINA PROBATE

COUNTY OF ___________________

Personally appeared before me the undersigned witness and made oath that she/he saw the within named sign, seal, and as their act and deed, delivered the within instrument; and that she/he with other witness whose signature appears above witnessed the execution thereof.

SWORN to before me this _________ day of ____________________, 2003.

____

NOTARY PUBLIC FOR ____

My Commission Expires: ____

APPENDIX C
General Interest Survey

SCDOT SMARTRIDE RESEARCH PROJECT

GENERAL INTEREST SURVEY

The South Carolina Department of Transportation (SCDOT) is launching a research project in the downtown Columbia area to evaluate the need for, and interest in, a Mass Transit commuter system. This system would provide commuters a viable alternative to current transportation modes. Commuters would leave their personal vehicles in a designated lot and commute downtown on buses. This system is designed to promote commuter comfort and safety. In addition, traffic congestion would be decreased and air quality and highway safety would be increased.

Please respond to the following questions. Please note that all survey items pertain to work-related transportation.

1. Please rate your level of interest in the proposed service.

- ❑ Very interested
- ❑ Somewhat interested
- ❑ No interest
- ❑ Undecided

2. Please indicate your potential participation in this service.

- ❑ Would definitely participate
- ❑ Would consider participating
- ❑ Would not participate
- ❑ Undecided

3. Currently, Northeast Columbia, Lexington, and Irmo/Chapin areas are being targeted for this service. Please indicate which of these areas would be most suitable for your commute.

- ❑ Northeast Columbia
- ❑ Lexington
- ❑ Irmo
- ❑ Newberry
- ❑ Chapin
- ❑ Camden
- ❑ None Suitable

4. If you would participate, please indicate what most interests you about this proposal.

- ❑ Convenience
- ❑ Time Savings
- ❑ Cost Savings
- ❑ Other ______________________________

5. If you would not participate, please indicate reasons for lack of interest.

- ❑ No suitable location for boarding
- ❑ Loss of personal vehicle
- ❑ Inconvenient scheduling
- ❑ Other ______________________________

Please provide your name and address for follow-up on this project.

Name ______________________________

Home Address ______________________________

____

Employer ______________________________

APPENDIX D

Weekly SmartRide Quality of Service Survey

QUALITY OF SERVICE SURVEY
SCDOT SMARTRIDE RESEARCH PROJECT (OCTOBER 2003)
POST OFFICE BOX 191
COLUMBIA, SC 29202 TELEPHONE: (803) 737-0831

DATE:
ROUTE:
1ST OR 2ND RUN:

Please return complete survey to the SCDOT volunteer or to the address given above.

PROJECT INFORMATION

1. How did you find out about the SmartRide Research Project?

- ☐ I attended a SmartRide Presentation.
- ☐ A co-worker informed me.
- ☐ A relative informed me.
- ☐ A friend informed me.
- ☐ Heard about it from a TV or radio news report.
- ☐ Read about it the news paper
- ☐ My job sent a memo or e-mail about it.
- ☐ Other: ________________________________

PROJECT SERVICE

2. Including today, how many days have you ridden the SmartRide bus in the last seven days?

- ☐ One Day
- ☐ Two Days
- ☐ Four Days
- ☐ Five Days
- ☐ Three Days

3. Please indicate how many days in total you have ridden the SmartRide bus since the services began on October 6, 2003.

- ☐ _______(Exact number)
- ☐ 1 to 4 Days
- ☐ 5 to 9 Days
- ☐ 10 to 15 Days
- ☐ 15 to 19 Days
- ☐ 20 Days

4. Please rate the SmartRide Project for the convenience of the pick up locations to riders.

- ☐ Very Poor
- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Very Good

5. Please rate SmartRide Project for the effectiveness of the pick up locations to serve as an all-day parking area (access, congestion, safety, security, adequate no. of spaces, conflicts with existing usage, etc.)

- ☐ Very Poor
- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Very Good

6. Please rate the SmartRide services for its timeliness.

- ☐ Very Poor
- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Very Good

7. Please rate the SmartRide services for its adherence to the safety of communing passengers.

- ☐ Very Poor
- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Very Good

8. Please rate the SmartRide bus drivers and SCDOT staff for their courteous and friendly service.

- ☐ Very Poor
- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Very Good

COMMUTER PROFILE

9. Please indicate the mode or method of transportation used to arrive at your work location:

- ☐ Drive alone
- ☐ Carpool
- ☐ Vanpool
- ☐ Bicycle
- ☐ Walk
- ☐ Other: ______________________________
- ☐ Public Transportation
- ☐ Taxi Service
- ☐ Motorcycle
- ☐ Work at Home (telecommute)
- ☐ Ride with relatives, neighbors or co-workers (not a formal carpool)

10. Have you ever lived in a city or town where you used transit services at least once a week to get to work, school, or personal appointments?

- ☐ YES
- ☐ NO

Please indicate the highest educational grade or year you completed and received credit for:

- ☐ First to Eight grade
- ☐ 9th to 11th grade
- ☐ 12th grade
- ☐ 13
- ☐ 14
- ☐ 15
- ☐ 16
- ☐ 17
- ☐ 18
- ☐ More than 18 years

Please indicate the range below that contains your current personal income level:

- ☐ Less than $10,000
- ☐ $10,000 to $20,000
- ☐ $20,000 to $30,000
- ☐ $30,000 to 40,000
- ☐ $40,000 to $50,000
- ☐ Greater than $50,000

11. What changes or conditions would make SmartRide a more attractive transportation option for you personally?

- ☐ Express service with fewer stops to downtown.
- ☐ Tax or cost benefit for using transit services.
- ☐ Other: ______________________________

12. Please give the name of the agency, office or business where you work.

____

APPENDIX E

Added Section to Weekly Survey
Benefits and Reasonable Fare Questions

BENEFIT AND REASONABLE FARE SURVEY
SCDOT SMARTRIDE RESEARCH PROJECT (OCTOBER 2003)
POST OFFICE BOX 191
COLUMBIA, SC 29202 TELEPHONE: (803) 737-0831; FAX: (803) 737-0145

DATE:
ROUTE:
1ST OR 2ND RUN:

Please return complete survey to the SCDOT volunteer or to the address given above.

1. Considering the time you can dedicate to other activities during the morning and evening commute on the SmartRide bus (reading, relaxing, putting thoughts on paper, chatting, etc.), how much time do you think you could gain per day by riding the bus to work on a regular basis?

- ☐ No time gains possible
- ☐ 1 to 10 minutes gained
- ☐ 10 to 20 minutes gained
- ☐ 0 to 30 minutes gained
- ☐ More than 30 minutes gained per day

2. If this commuter transit service were continued on an on-going basis, how often do you estimate you would use it as a means to get to and from work?

- ☐ I would not use the on-going service
- ☐ No more that once a week
- ☐ 2 or 3 days a week
- ☐ About 4 days a week
- ☐ Everyday (5 days a week)

3. Considering the overall costs required to drive to work each week (gasoline, oil changes parking costs, etc.), how much money do estimate you would save by using a commuter transit service such as SmartRide on a regular basis?

- ☐ No savings possible
- ☐ $1.00 to $5.00 per week
- ☐ $5.00 to $10.00 per week
- ☐ $10.00 to $15.00 per week
- ☐ $15.00 to $20.00 per week
- ☐ $20.00 to $25.00 per week
- ☐ More than $25.00 per week

4. Considering the overall benefit of the SmartRide transportation project, what fare is reasonable to ride the bus to and from work on a weekly basis?

- ☐ Less than $10.00 per week
- ☐ $10.00 to $15.00 per week
- ☐ 15.00 to $20.00 per week
- ☐ $20.00 to $25.00 per week
- ☐ $25.00 to $30.00 per week
- ☐ Greater than $30.00 per week

5. Considering the overall benefit of the SmartRide transportation project, what fare is reasonable to collect for the bus ride to and from work on a weekly basis?

- ☐ $1.00 per trip or $10.00 per week
- ☐ $1.25 per trip or $12.50 per week
- ☐ $1.50 per trip or $15.00 per week
- ☐ $1.75 per trip or $17.50 per week
- ☐ $2.00 per trip or $20.00 per week
- ☐ $2.25 per trip or $22.50 per week
- ☐ $2.50 per trip or $25.00 per week
- ☐ $3.00 per trip or $30.00 per week

6. If this commuter transit service were continued on an on-going basis, which of the following fare payment options would be more convenient for you?

- ☐ Cash
- ☐ One-way tickets
- ☐ Pre-paid unit pass for a set number of trips
- ☐ Pre-paid weekly or monthly pass
- ☐ Some other payment arrangement: ______________________________

MT/db (27 October 03)

APPENDIX F

High Occupancy Vehicle (HOV) Report

HIGH OCCUPANCY VEHICLE (HOV) SUMMARY REPORT

(Excerpted from full Report)

Sub-Committee Members:

Carol Jones, Traffic Engineering	John Gardner, Planning
Dipak Patel, Traffic Engineering	Beacham Broker, Legal, Advisory Member
Brent Dillon, Traffic Engineering	David Morris, FHWA, Advisory Member
Eddie Sawyer, Traffic Engineering	David Burgess, Ad Hoc member

Purpose

The purpose of the HOV subcommittee was to review the feasibility of implementing HOV lanes concurrent with the SMART RIDE Research project for a one-week research/trial period in October 2003.

Roadway Eligibility

The subcommittee met to determine which routes might be feasible for HOV lanes. To allow for passing maneuvers and to minimize conflicts, eligible routes must be interstate routes with a minimum of 3 travel lanes in the direction HOV is to be implemented. There are two sections of interstate identified in the SMARTRIDE Research project that meet the minimum 3 travel lanes in each direction criteria;

I-26/I-126 between US 176 and Huger Street ~ 10 miles

I-20 between I-77 and SC 277 ~ 2.5 miles

The subcommittee determined the I-20 corridor is not long enough to effectively sign an HOV lane due to the 2 mile length. There is extensive queuing at the 277-entrance ramp during the morning commute and motorists attempting to exit must stay to the right. For the outbound commute, the 3-lane section reduces to 2 lanes just east of the I-77 interchange. The I-20 corridor was not of sufficient length to effectively establish any type of HOV lane, between SC 277 and I-77, where the 3-lane section ends.

Therefore, the only eligible route that the subcommittee considered in our reviews was I-26/126 between US 176 and Huger Street.

HOV Research

The subcommittee began researching other state's experiences with HOV lanes to determine appropriate pros and cons of this preferential lane treatment. We also reviewed the signing and marking standards, required by the national Manual on Uniform Traffic Control Devices. Of course we also reviewed this section of roadway in light of the present geometric design, available lane configuration, and existing traffic demands. The following report summarizes our findings and in addition addresses issues such as implementation times, various implementation scenarios and costs.

Traffic Analysis

The traffic analysis on I-26/126 reveals heavy traffic during the morning and evening peak hour, resulting in slow moving traffic and extensive delays. Observations during this time revealed between 89 and 91% of motorists are single occupant motorists, not eligible to utilize an HOV lane without changing their commuting habits. Converting one of the general use traffic lanes to an HOV lane, assuming 100% compliance and no new carpools would result in severe traffic breakdowns on the remaining two general use lanes. The subcommittee is unable to determine what level of compliance would be achieved without enforcement, extensive public awareness, and appropriate signs and markings.

Impact of Short Implementation/Duration Time

Upon researching the implementation and operation of HOV lanes, the subcommittee has concerns about the short duration time of this research project. Most HOV lanes are planned over the course of several years and involve a multi-disciplined approach, ranging from enforcement, public awareness, maintenance, engineering staff to policy makers. An HOV lane will be unlikely to be effective during such a short research period and it is going to be labor intensive to obtain field data during such a short trial period. In addition, motorists driving behavior, during such a quick implementation, would likely be erratic or unchanged from normal.

Legal Issues

There are several legal issues the subcommittee addressed concerning the establishment of HOV lanes. First, does SCDOT have the legal authority to implement these lanes, 2) would FHWA recognize this authority or would they expect reimbursement of federal dollars because of lane restrictions, and 3) would the enforcement agencies have the authority to enforce this restriction with our existing legislation.

1) According to Mr. Beacham Brooker in our Legal office, SC Code Ann. 57-3-110(3) and 56-5-1980 give SCDOT the authority to establish HOV lanes. The excerpts from these codes are found in Appendix A, at end of the full HOV report.
2) According to Mr. David Morris with FHWA, there would be no financial impact concerning the implementation of HOV lanes, however they have expressed other concerns, as indicated in next section.
3) According to Department of Public Safety attorneys, enforcement could be done under the "obedience to signs" statute (57-5-950), however they would prefer a more specific statute. A copy of the State of Virginia's code 33.1-46.2 can be found in Appendix B, at the end of the full HOV report.

FHWA Position

According to Mr. David Morris, with FHWA, their primary concern is safety. If HOV implementation resulted in motorist confusion, back-ups or erratic maneuvers, SCDOT should be prepared to immediately change back to normal operation.

- If SCDOT implements HOV lanes, they should be placed where there are the most lanes, to minimize backups and queuing; perhaps only on I-126.
- If SCDOT implements HOV lanes, they should utilize SCDOT's public awareness capabilities to explain what HOV lanes are and how they are proposed to be used thoroughly to the general public, for at least 2 weeks prior to implementation.
- If HOV implementation trial period is one or two weeks, enforcement will not be feasible if signs & markings are not MUTCD compliant and if a specific statute is not passed describing requirements and fines for violations.

FHWA's biggest concern (after safety) is negative publicity – implementation of HOV lanes in other areas, by removing an existing lane, have resulted in a very vocal and irate motoring public.

Pros & Cons

Upon review of available documentation and the traffic analysis for our particular area, the committee established the following list of Pros and Cons for HOV implementation and on the following page a comparison between median side HOV and Shoulder side HOV lanes.
*Issues related to short trial period

Pros	Cons
If HOV encourages more carpooling, there is a potential for reduced traffic volumes	Currently there is no law to allow enforcement of HOV lane
If HOV encourages more carpooling, there is a potential for reduced travel times	The cost to install/remove signs & markings for a short time period would be prohibitive*
	HOV signs and markings are unfamiliar to SC motorists- potential for driver misunderstanding
	Safety issues (speed differential, erratic lane changes at ramps, additional congestion on non HOV lanes)
	Short trial period is detrimental to research activity*
	Implementation of HOV lanes may require construction improvements
	Media focus could be inflammatory stressing preferential lane issue, no enforcement issue, or expense for research issue
	HOV lane trial may have no effect due to non compliance
	Queuing at ramps limit effectiveness of HOV lanes, due to length of queues and difficulty in getting into queue from HOV lane
	Restricts single occupant vehicles to two lanes vs. three

Pros & Cons of **Median lane HOV treatment** vs. Shoulder lane HOV treatment

Pros	***Cons***
No reconstruction needed	Restricts single occupant vehicles to two lanes vs. three
	Implementations of signing and markings require temporary lane closures

Pros & Cons of **Shoulder lane HOV** treatment vs. Median lane HOV treatment

Pros	***Cons***
Easier sign installations	No emergency lane
Easier pavement marking installation	Change in driver's expectancy with faster traffic in right most lane
Easier for HOV traffic to enter and exit the freeway	Rumble strip would have to be removed
Traffic control during signing and marking would be simpler and no interruption in traffic.	Construction improvements would be needed
	Reduction in deceleration lane/acceleration lane operation at ramps
	Sporadic starting and stopping of HOV lanes at ramps

Recommendation

The subcommittee reviewed several alternatives for implementation, as detailed on pages 4-5 of this summary. Case 1 and Case 2 involve converting an existing lane of traffic to HOV use, while Cases 3-5 involve adding an additional travel lane to accommodate HOV traffic. Costs and implementation times are outlined in Tables on page 6.

Based on the information gathered during our review, the subcommittee would not recommend converting a general use lane, temporarily or permanently, to HOV operation as outlined in Case 1 or 2. The potential for adverse impact on existing traffic as well as potential for negative public reaction would likely reflect poorly on SCDOT and the SMARTRIDE project as well. More in depth study is needed to determine the cost/benefit ratio of implementing HOV lanes, as detailed in Case 3 - 5.

Alternatives

The committee discussed several scenarios concerning possible HOV implementation. These various alternatives are detailed below:

Case 1 - HOV Outside Left Lane, Designated

This would be implemented using dynamic message signs, median mounted signs, and public information, only. This proposal converts an existing general use travel lane into an HOV lane during the a.m. and p.m. peak commuting times. The HOV lane would be established inbound during the morning commute and outbound during the evening commute.

Temporary Cost $30,000 – $40,000 total
Permanent Cost **$30,000 – $40,000 annually**

Case 2 – HOV Outside Left Lane, Designated and Marked

This would be implemented using pavement markings and raised markers in addition to the dynamic message signs, median mounted signs, and public information listed in Case 1. As in Case 1, this proposal converts an existing general use travel lane into an HOV lane during the a.m. and p.m. peak commuting times. The HOV lane would be established inbound during the morning commute and outbound during the evening commute.

Temporary Cost $50,000 per mile
Permanent Cost $50,000 per mile
Therefore, for a 10-mile section - **$500,0000**

Case 3 – HOV Shoulder Lane, Designated and Marked

This would be implemented on the shoulder area after some shoulder rehabilitation using dynamic message signs, pole mounted and overhead signs, pavement markings and raised markers and public information. This proposal adds a HOV lane by converting the shoulder area during the a.m. and p.m. peak commuting times. The HOV lane would be established inbound during the morning commute and outbound during the evening commute. At interchanges, the HOV lane would end, to allow general use of this shoulder lane to exit or enter the freeway. The HOV lane would pick up again just past the interchange.

Temporary Cost $100,000 per mile
Permanent Cost $500,000 - $800,000 per mile
Therefore, for a 10-mile section – $8 million

Case 3a – HOV Outside Left Lane, Designated and Marked

Case 3a is the same concept as Case 3, except the shoulder lane would be used as a general use lane during the a.m. and p.m. peak hours, and the HOV lane would be established in the far left lane of the interstate. This eliminates having to start and stop the HOV lane at interchanges. This would be implemented as indicated above utilizing some shoulder rehabilitation, dynamic message signs, pole mounted and overhead signs, pavement markings and raised markers and, of course, public information.

Temporary Cost $100,000 per mile
Permanent Cost $500,000 - $800,000 per mile
Therefore, for 10-mile section – **$8 million**

Case 4 – HOV Reversible Median Lane, Constructed

HOV lanes are implemented by adding one reversible lane in the median area of the interstate. This HOV lane would be separated by median barriers and would have a limited number of access points. Implementation would include median and shoulder reconstruction, drainage reconstruction, the use of new dynamic message signs, pavement markings, pole and overhead signs, and a public information campaign. Gates would also be needed to prevent wrong way movements at entrances and exits. There would be substantial costs related to interchange reconstruction as well.

Temporary Cost   Not applicable
Permanent Cost $3 - 4 million/mile + $2-3 million/bridge + $20 million @ entry/exit interchanges, Therefore, for a 10-mile section – **$85 million**

Case 4a&b – HOV Reversible Lane, Designated, Contraflow

HOV lanes are implemented by designating a lane in the opposing direction from the peak travel direction. This lane would begin between the Piney Grove and St Andrews interchanges and end between the I-26 and Colonial Life interchanges. During the morning peak, a lane would be utilized from westbound I-26 for eastbound (inbound) HOV traffic. This HOV lane would be separated from the opposing traffic by a moveable median barrier. After the peak traffic is over, the barriers would be moved to the median area and traffic operation would resume as normal. Implementation would require construction of the two crossovers, installation of new dynamic message signs and overhead signs, and substantial public information. Moveable barriers would need to be purchased, along with the machines required to move them. This is a 3 mile section and moving the barriers would take approximately 20 minutes/mile.

Temporary/Rental Cost - $13 million/year
Permanent Cost - $44 million

Case 5 – HOV Lane Addition, Constructed

This case establishes a new HOV lane in each direction along I-26/126. This would be the ultimate design for implementing permanent HOV lanes. Costs would include all construction costs related to interstate widening, as well as new dynamic message signs, pole and overhead signs, pavement and raised markings, as well as public information.

Temporary Cost   Not Applicable
Permanent Cost $4 - 5 million/mile +$2-3 million/bridge + $10-15/interchange + $200 million @ I-20
Therefore, for a 10-mile section – **$300 million**

APPENDIX G

SmartRide Research Project Bus Schedule

irmo

MORNING

DMV Parking Lot Peak	Midlands Tech. College Parking Lot	Bull & Confederate DSS,DHEC	Medical Park Road Richland Hosp	Sumter & Laurel Streets Transit Ctr	Sumter & Hampton Sts. Palmetto Hlth	Sumter at State House	Sumter & Pendleton St. Off. Bldg.	Pendleton at Assembly SCDOT, DNR	Assembly & Gervais Streets	Assembly & Washington Streets	Assembly & Blanding Streets
6:25 AM	6:40 AM	7:00 AM	7:03 AM	7:09 AM	7:11 AM	7:13 AM	7:15 AM	7:18 AM	7:21 AM	7:23 AM	7:25 AM
7:25 AM	7:40 AM	8:05 AM	8:08 AM	8:14 AM	8:16 AM	8:18 AM	8:20 AM	8:23 AM	8:26 AM	8:28 AM	8:30 AM

EVENING

Bull & Confederate DSS,DHEC	Medical Park Road Richland Hosp	Sumter & Laurel Streets Transit Ctr	Sumter & Hampton Sts. Palmetto Hlth	Sumter at State House	Sumter & Pendleton St. Off. Bldg	Pendleton at Assembly SCDOT, DNR	Assembly & Gervais Streets	Assembly & Washington Streets	Assembly & Blanding Streets	Midlands Tech. College Parking Lot	DMV Parking Lot Peak
4:05 PM	4:08 PM	4:11 PM	4:13 PM	4:15 PM	4:17 PM	4:19 PM	4:21 PM	4:23 PM	4:25 PM	4:45 PM	5:00 PM
5:05 PM	5:08 PM	5:11 PM	5:13 PM	5:15 PM	5:17 PM	5:19 PM	5:21 PM	5:23 PM	5:25 PM	5:55 PM	6:10 PM

lexington

MORNING

Piggly Wiggly Parking Lot	SCDOT Park & Ride Lot	Bull & Confederate DSS,DHEC	Medical Park Road Richland Hosp	Sumter & Laurel Streets Transit Ctr	Sumter & Hampton Sts. Palmetto Hlth	Sumter at State House	Sumter & Pendleton St. Off. Bldg.	Pendleton at Assembly SCDOT, DNR	Assembly & Gervais Streets	Assembly & Washington Streets	Assembly & Blanding Streets
6:35 AM	6:45 AM	7:00 AM	7:03 AM	7:09 AM	7:11 AM	7:13 AM	7:15 AM	7:18 AM	7:21 AM	7:23 AM	7:25 AM
7:35 AM	7:45 AM	8:05 AM	8:08 AM	8:14 AM	8:16 AM	8:18 AM	8:20 AM	8:23 AM	8:26 AM	8:28 AM	8:30 AM

EVENING

Bull & Confederate DSS,DHEC	Medical Park Road Richland Hosp	Sumter & Laurel Streets Transit Ctr	Sumter & Hampton Sts. Palmetto Hlth	Sumter at State House	Sumter & Pendleton St. Off. Bldg	Pendleton at Assembly SCDOT, DNR	Assembly & Gervais Streets	Assembly & Washington Streets	Assembly & Blanding Streets	SCDOT Park & Ride Lot	Piggly Wiggly Parking Lot
4:05 PM	4:09 PM	4:13 PM	4:15 PM	4:17 PM	4:19 PM	4:21 PM	4:23 PM	4:25 PM	4:27 PM	4:42 PM	4:52 PM
5:05 PM	5:09 PM	5:13 PM	5:15 PM	5:17 PM	5:19 PM	5:21 PM	5:23 PM	5:25 PM	5:27 PM	5:47 PM	5:57 PM

lugoff

MORNING

Days Inn Parking Lot	Medical Park Road Richland Hosp	Bull & Confederate DSS,DHEC	Sumter & Laurel Streets Transit Ctr	Sumter & Hampton Sts. Palmetto Hlth	Sumter at State House	Sumter & Pendleton St. Off. Bldg.	Pendleton at Assembly SCDOT, DNR	Assembly & Gervais Streets	Assembly & Washington Streets	Assembly & Blanding Streets
6:40 AM	7:00 AM	7:03 AM	7:08 AM	7:10 AM	7:12 AM	7:14 AM	7:16 AM	7:18 AM	7:21 AM	7:24 AM
7:40 AM	8:00 AM	8:03 AM	8:08 AM	8:10 AM	8:12 AM	8:14 AM	8:16 AM	8:18 AM	8:21 AM	8:24 AM

EVENING

Sumter & Laurel Streets Transit Ctr	Sumter & Hampton Sts. Palmetto Hlth	Sumter at State House	Sumter & Pendleton St. Off. Bldg	Pendleton at Assembly SCDOT, DNR	Assembly & Gervais Streets	Assembly & Washington Streets	Assembly & Blanding Streets	Bull & Confederate DSS,DHEC	Medical Park Road Richland Hosp	Days Inn Parking Lot
4:05 PM	4:07 PM	4:09 PM	4:11 PM	4:13 PM	4:15 PM	4:17 PM	4:19 PM	4:23 PM	4:27 PM	4:47 PM
5:05 PM	5:07 PM	5:09 PM	5:11 PM	5:13 PM	5:15 PM	5:17 PM	5:19 PM	5:23 PM	5:27 PM	5:47 PM

newberry

MORNING

Newberry Shopping Center	Gazebo Parking Lot Little Mtn.	O'Cain Advertising Chapin	Bull & Confederate DSS,DHEC	Medical Park Road Richland Hsp	Sumter & Laurel Sts. Transit Ctr	Sumter & Hampton Sts. Palmetto Hlth	Sumter at State House	Sumter & Pendleton St. Off. Bldg.	Pendleton at Assembly SCDOT, DNR	Assembly & Gervais Streets	Assembly & Washington Streets	Assembly & Blanding Streets
6:00 AM	6:20 AM	6:30 AM	7:00 AM	7:03 AM	7:09 AM	7:11 AM	7:13 AM	7:15 AM	7:18 AM	7:21 AM	7:23 AM	7:25 AM
7:00 AM	7:20 AM	7:30 AM	8:05 AM	8:08 AM	8:14 AM	8:16 AM	8:18 AM	8:20 AM	8:23 AM	8:26 AM	8:28 AM	8:30 AM

EVENING

Bull & Confederate DSS,DHEC	Medical Park Road Richland Hsp	Sumter & Laurel Sts. Transit Ctr	Sumter & Hampton Sts. Palmetto Hlth	Sumter at State House	Sumter & Pendleton St. Off. Bldg.	Pendleton at Assembly SCDOT, DNR	Assembly & Gervais Streets	Assembly & Washington Streets	Assembly & Blanding Streets	O'Cain Advertising Chapin	Gazebo Parking Lot Little Mtn.	Newberry Shopping Center
4:05 PM	4:09 PM	4:13 PM	4:15 PM	4:17 PM	4:19 PM	4:21 PM	4:23 PM	4:25 PM	4:27 PM	4:52 PM	5:02 PM	5:22 PM
5:05 PM	5:09 PM	5:13 PM	5:15 PM	5:17 PM	5:19 PM	5:21 PM	5:23 PM	5:25 PM	5:27 PM	5:57 PM	6:07 PM	6:27 PM

APPENDIX H

Project Passenger Boarding Numbers

MORNING RUN	M	T	W	Th	F	WK1	M	T	W	Th	F	WK2	M	T	W	Th	F	WK3	M	T	W	Th	F	WK4	GRAND TOTAL
IRMO 1ST RUN																									
DMV	2	2	15	9	2	**30**	5	2	5	4	2	**18**	2	5	6	5	2	**20**	4	4	4	3	4	**19**	**87**
Midlands Tech	5	5	4	7	6	**27**	3	6	4	5	2	**20**	5	6	3	3	4	**21**	3	8	5	4	3	**23**	**91**
TOTAL	7	7	19	16	8	57	8	8	9	9	4	38	7	11	9	8	6	41	7	12	9	7	7	42	178
2ND RUN																									
DMV	5	4	2	4	3	**18**	2	2	3	3	0	**10**	1	1	3	3	1	**9**	4	3	2	3	2	**14**	**51**
Midlands Tech	12	13	10	11	9	**55**	9	9	13	7	5	**43**	6	4	4	5	5	**24**	10	8	9	4	7	**38**	**160**
TOTAL	17	17	12	15	12	73	11	11	16	10	5	53	7	5	7	8	6	33	14	11	11	7	9	52	211
ALL RUNS TOTAL	24	24	31	31	20	130	19	19	25	19	9	91	14	16	16	16	12	74	21	23	20	14	16	94	389
LEXINGTON 1ST RUN																									
Lex. Co. Aux						**0**						**0**			0	0	0	**0**	0	0	0	1	0	**1**	**1**
Piggly Wiggly	2	1	1	1	0	**5**	0	0	1	0	0	**1**	0	0	1	0	0	**1**	0	0	0	0	1	**1**	**8**
Park & Ride	0	0	1	0	1	**2**	3	2	0	0	1	**6**	0	1	0	0	1	**2**	0	0	2	0	0	**2**	**12**
TOTAL	2	1	2	1	1	7	3	2	1	0	1	7	0	1	1	0	1	3	0	0	2	1	1	4	21
2ND RUN																									
Lex. Co. Aux						**0**						**0**			0	4	4	**8**	2	6	3	6	5	**22**	**30**
Piggly Wiggly	5	3	4	2	5	**19**	4	2	8	5	4	**23**	6	3	6	5	4	**24**	2	3	7	5	4	**21**	**87**
Park & Ride	4	0	3	4	3	**14**	5	3	4	3	2	**17**	2	2	3	3	2	**12**	4	3	4	5	3	**19**	**62**
TOTAL	9	3	7	6	8	33	9	5	12	8	6	40	8	5	9	12	10	44	8	12	14	16	12	62	179
ALL RUNS TOTAL	11	4	9	7	9	40	12	7	13	8	7	47	8	6	10	12	11	47	8	12	16	17	13	66	200
LUGOFF 1ST RUN																									
Days Inn	6	5	9	6	1	**27**	5	5	8	6	3	**27**	4	6	10	5	3	**28**	7	6	5	5	5	**28**	**110**
TOTAL	6	5	9	6	1	27	5	5	8	6	3	27	4	6	10	5	3	28	7	6	5	5	5	28	110
2ND RUN																									
Days Inn	4	7	6	7	6	**30**	7	7	3	6	0	**23**	6	8	9	5	7	**35**	8	10	7	8	8	**41**	**129**
TOTAL	4	7	6	7	6	30	7	7	3	6	0	23	6	8	9	5	7	35	8	10	7	8	8	41	129
ALL RUNS TOTAL	10	12	15	13	7	57	12	12	11	12	3	50	10	14	19	10	10	63	15	16	12	13	13	69	239
NEWBERRY 1st RUN																									
Newberry	1	1	2	4	2	**10**	2	2	3	2	4	**13**	2	2	3	3	1	**11**	3	3	3	3	2	**14**	**48**
Little Mountain	1	5	5	3	2	**16**	2	2	4	1	2	**11**	3	3	2	4	3	**15**	4	3	4	5	3	**19**	**61**
Chapin	7	3	6	3	2	**21**	3	2	2	3	3	**13**	2	5	3	5	5	**20**	6	9	8	**9**	**12**	**44**	**98**
TOTAL	9	9	13	10	6	47	7	6	9	6	9	37	7	10	8	12	9	46	13	15	15	17	17	77	207
2nd RUN																									
Newberry	4	2	2	5	0	**13**	3	3	3	2	4	**15**	2	4	3	5	3	**17**	6	4	2	4	4	**20**	**65**
Little Mountain	6	2	2	2	0	**12**	2	2	2	4	3	**13**	2	1	3	3	0	**9**	5	3	2	3	1	**14**	**48**
Chapin	5	10	12	13	6	**46**	12	12	10	16	12	**62**	9	10	15	14	9	**57**	10	14	9	10	10	**53**	**218**
TOTAL	15	14	16	20	6	71	17	17	15	22	19	90	13	15	21	22	12	83	21	21	13	17	15	87	331
ALL RUNS TOTAL	24	23	29	30	12	118	24	23	24	28	28	127	20	25	29	34	21	129	34	36	28	34	32	164	538
GRAND TOTAL	**69**	**63**	**84**	**81**	**48**	**345**	**67**	**61**	**73**	**67**	**47**	**315**	**52**	**61**	**74**	**72**	**54**	**313**	**78**	**87**	**76**	**78**	**74**	**393**	**1,366**

AFTERNOON RUN	M	T	W	Th	F	WK1	M	T	W	Th	F	WK2	M	T	W	Th	F	WK3	M	T	W	Th	F	WK4	GRAND TOTAL
IRMO 1st RUN																									
DMV	2	2	15	9	2	30	7	4	5	4	2	22	2	5	6	5	2	20	4	4	4	3	4	19	91
Midlands Tech	5	5	4	7	6	27	1	3	4	5	3	16	5	6	3	3	4	21	3	8	5	4	3	23	87
TOTAL	7	7	19	16	8	57	8	7	9	9	5	38	7	11	9	8	6	41	7	12	9	7	7	42	178
2nd RUN																									
DMV	5	4	2	4	3	18	0	2	3	3	1	9	1	1	3	3	1	9	4	3	2	3	3	15	51
Midlands Tech	12	13	10	11	9	55	13	9	13	7	2	44	6	4	4	5	5	24	10	8	9	4	7	38	161
TOTAL	17	17	12	15	12	73	13	11	16	10	3	53	7	5	7	8	6	33	14	11	11	7	10	53	212
1st & 2nd TOTAL	24	24	31	31	20	130	21	18	25	19	8	91	14	16	16	16	12	74	21	23	20	14	17	95	390
LEXINGTON 1st RUN																									
Lex. Co. Aux						0						0			0	0	0	0	0	0	0	1	0	1	1
Piggly Wiggly	2	1	1	1	0	5	0	1	1	0	1	3	0	0	1	0	0	1	0	0	0	0	1	1	10
Park & Ride	0	0	1	0	1	2	6	4	0	0	3	13	0	1	0	0	1	2	0	0	2	0	0	2	19
TOTAL	2	1	2	1	1	7	6	5	1	0	4	16	0	1	1	0	1	3	0	0	2	1	1	4	30
2nd RUN																									
Lex. Co. Aux						0						0			0	4	4	8	2	6	3	6	5	22	30
Piggly Wiggly	5	3	4	2	5	19	0	2	8	5	1	16	6	3	6	5	4	24	2	3	7	5	4	21	80
Park & Ride	4	0	3	4	3	14	7	0	4	3	2	16	2	2	3	3	2	12	4	3	4	5	3	19	61
TOTAL	9	3	7	6	8	33	7	2	12	8	3	32	8	5	9	12	10	44	8	12	14	16	12	62	171
1st & 2nd TOTAL	11	4	9	7	9	40	13	7	13	8	7	48	8	6	10	12	11	47	8	12	16	17	13	66	201
LUGOFF 1st RUN																									
Days Inn	6	5	9	6	1	27	7	1	8	6	1	23	4	6	10	5	3	28	7	6	5	5	5	28	106
TOTAL	6	5	9	6	1	27	7	1	8	6	1	23	4	6	10	5	3	28	7	6	5	5	5	28	106
2nd RUN																									
Days Inn	4	7	6	7	6	30	5	7	3	6	2	23	6	8	9	5	7	35	8	10	7	8	8	41	129
TOTAL	4	7	6	7	6	30	5	7	3	6	2	23	6	8	9	5	7	35	8	10	7	8	8	41	129
1st & 2nd TOTAL	10	12	15	13	7	57	12	8	11	12	3	46	10	14	19	10	10	63	15	16	12	13	13	69	235
NEWBERRY 1st RUN																									
Newberry	1	1	2	4	2	10	1	2	3	2	4	12	2	2	3	3	1	11	3	3	3	3	2	14	47
Little Mountain	1	5	5	3	2	16	2	2	4	1	2	11	3	3	2	4	3	15	4	3	4	5	3	19	61
Chapin	7	3	6	3	2	21	6	4	2	3	2	17	2	5	3	5	5	20	6	9	8	9	12	44	102
TOTAL	9	9	13	10	6	47	9	8	9	6	8	40	7	10	8	12	9	46	13	15	15	17	17	77	210
2nd RUN																									
Newberry	4	2	2	5	0	13	3	3	3	2	4	15	2	4	3	5	3	17	6	4	2	4	4	20	65
Little Mountain	6	2	2	2	0	12	4	7	2	4	4	21	2	1	3	3	0	9	5	3	2	3	2	15	57
Chapin	5	10	12	13	6	46	12	9	10	16	3	50	9	10	15	14	9	57	10	14	9	10	10	53	206
TOTAL	15	14	16	20	6	71	19	19	15	22	11	86	13	15	21	22	12	83	21	21	13	17	16	88	328
1st & 2nd TOTAL	24	23	29	30	12	118	28	27	24	28	19	126	20	25	29	34	21	129	34	36	28	34	33	165	538
GRAND TOTAL	69	63	84	81	48	345	74	60	73	67	37	311	52	61	74	72	54	313	78	87	76	78	76	395	1,364

COMBINED	M	T	W	Th	F	WK1	M	T	W	Th	F	WK2	M	T	W	Th	F	WK3	M	T	W	Th	F	WK4	GRAND TOTAL
IRMO 1st RUN																									
DMV	4	4	30	18	4	60	12	6	10	8	4	40	4	10	12	10	4	40	8	8	8	6	8	38	178
Midlands Tech	10	10	8	14	12	54	4	9	8	10	5	36	10	12	6	6	8	42	6	16	10	8	6	46	178
TOTAL	14	14	38	32	16	114	16	15	18	18	9	76	14	22	18	16	12	82	14	24	18	14	14	84	356
2nd RUN																									
DMV	10	8	4	8	6	36	2	4	6	6	1	19	2	2	6	6	2	18	8	6	4	6	5	29	102
Midlands Tech	24	26	20	22	18	110	22	18	26	14	7	87	12	8	8	10	10	48	20	16	18	8	14	76	321
TOTAL	34	34	24	30	24	146	24	22	32	20	8	106	14	10	14	16	12	66	28	22	22	14	19	105	423
1st & 2nd TOTAL	24	24	31	31	20	260	40	37	50	38	17	182	28	32	32	32	24	148	42	46	40	28	33	189	779
LEXINGTON 1st RUN																									
Lex. Co. Aux						0						0			0	0	0	0	0	0	0	2	0	2	2
Piggly Wiggly	4	2	2	2	0	10	0	1	2	0	1	4	0	0	2	0	0	2	0	0	0	0	2	2	18
Park & Ride	0	0	2	0	2	4	9	6	0	0	4	19	0	2	0	0	2	4	0	0	4	0	0	4	31
TOTAL	4	2	4	2	2	14	9	7	2	0	5	23	0	2	2	0	2	6	0	0	4	2	2	8	51
2nd RUN																									
Lex. Co. Aux						0						0			0	8	8	16	4	12	6	12	10	44	60
Piggly Wiggly	10	6	8	4	10	38	4	4	16	10	5	39	12	6	12	10	8	48	4	6	14	10	8	42	167
Park & Ride	8	0	6	8	6	28	12	3	8	6	4	33	4	4	6	6	4	24	8	6	8	10	6	38	123
TOTAL	18	6	14	12	16	66	16	7	24	16	9	72	16	10	18	24	20	88	16	24	28	32	24	124	350
1st & 2nd TOTAL	22	8	18	14	18	80	25	14	26	16	14	95	16	12	20	24	22	94	16	24	32	34	26	132	401
LUGOFF 1st RUN																									
Days Inn	12	10	18	12	2	54	12	6	16	12	4	50	8	12	20	10	6	56	14	12	10	10	10	56	216
TOTAL	12	10	18	12	2	54	12	6	16	12	4	50	8	12	20	10	6	56	14	12	10	10	10	56	216
2nd RUN																									
Days Inn	8	14	12	14	12	60	12	14	6	6	2	46	12	16	18	10	14	70	16	20	14	16	16	82	258
TOTAL	8	14	12	14	12	60	12	14	6	6	2	46	12	16	18	10	14	70	16	20	14	16	16	82	258
1st & 2nd TOTAL	20	24	30	26	14	114	24	20	22	12	6	96	20	28	38	20	20	126	30	32	24	26	26	138	474
NEWBERRY 1st RUN																									
Newberry	2	2	4	8	4	20	3	4	6	4	8	25	4	4	6	6	2	22	6	6	6	6	4	28	95
Little Mountain	2	10	10	6	4	32	4	4	8	2	4	22	6	6	4	8	6	30	8	6	8	10	6	38	122
Chapin	14	6	12	6	4	42	9	6	4	6	5	30	4	10	6	10	10	40	12	18	16	18	24	88	200
TOTAL	18	18	26	20	12	94	16	14	18	12	17	77	14	20	16	24	18	92	26	30	30	34	34	154	417
2nd RUN																									
Newberry	8	4	4	10	0	26	6	6	6	4	8	30	4	8	6	10	6	34	12	8	4	8	8	40	130
Little Mountain	12	4	4	4	0	24	6	9	4	8	7	34	4	2	6	6	0	18	10	6	4	6	3	29	105
Chapin	10	20	24	26	12	92	24	21	20	32	15	112	18	20	30	28	18	114	20	28	18	20	20	106	424
TOTAL	30	28	32	40	12	142	36	36	30	44	30	176	26	30	42	44	24	166	42	42	26	34	31	175	659
1st & 2nd TOTAL	48	46	58	60	24	236	52	50	48	56	47	253	40	50	58	68	42	258	68	72	56	68	65	329	1076
GRAND TOTAL	138	126	168	162	96	690	141	121	146	134	84	626	104	122	148	144	108	626	156	174	152	156	150	788	2,730

APPENDIX I

SmartRide Project Budget

SMARTRIDE BUDGET/EXPENDITURES					
LINE ITEMS	**BUDGETED**		**COST**	**QUANTITY**	
		HPD	CPH	# of Days	TOTAL
Vehicle/driver use (CMRTA)	$49,200.00	30	$72.75	20	$43,650.00
6 -Oct		32	$72.75		$2,328
7-Oct		32	$72.75		$2,328
8-Oct		32	$72.75		$2,328
9-Oct		32	$72.75		$2,328
10-Oct		32	$72.75		$2,328
Weekly Total		160	$72.75		$11,640.00
13-Oct		32	$72.75		$2,328
14-Oct		32	$72.75		$2,328
15-Oct		32	$72.75		$2,328
16-Oct		32	$72.75		$2,328
17-Oct		32	$72.75		$2,328
Weekly Total		160	$72.75		$11,640.00
20-Oct		32	$72.75		$2,328
21-Oct		32	$72.75		$2,328
22-Oct		32	$72.75		$2,328
23-Oct		32	$72.75		$2,328
24-Oct		32	$72.75		$2,328
Weekly Total		160	$72.75		$11,640.00
27-Oct		32	$72.75		$2,328
28-Oct		32	$72.75		$2,328
29-Oct		32	$72.75		$2,328
30-Oct		32	$72.75		$2,328
31- Oct		32	$72.75		$2,328
Weekly Total		160	$72.75		$11,640.00
Monthly Total (20 days)		640			$46,560.00
Promotional Items	$4,300.00				
Radios (FM)				300	$648.03
Stadium Cushion				300	$762.99
Tote/Umbrella				50	$673.70
Cooler				50	$223.56
Pencils				300	$215.42
Shirts				75	$1,719.66
Total Promotionals					$4,243.36
Signs	$500.00		$1,295.26		$1,295.26
Report (Publishing)	$1,000.00				
STARTING BUDGET	**$55,000.00**				
TOTAL EXPENDITURES					**$53,098.62**
BUDGET REMAINING					**$1,901.38**

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