



CITY OF SPARTANBURG

SOUTH CAROLINA

CITY COUNCIL AGENDA

City Council Meeting
City Council Chambers
145 West Broad Street
Spartanburg, SC
Monday, December 14, 2015
5:30 p.m.

- I. **Moment of Silence**
- II. **Pledge of Allegiance**
- III. **Approval of the Minutes of the November 23, 2015 City Council Meeting**
- IV. **Approval of Agenda of the December 14, 2015 City Council Meeting**
- V. **Public Comment**
*Citizen Appearance forms are available at the door and should be submitted to the City Clerk
- VI. **Presentation on Robert Wood Johnson Foundation Culture of Health Prize**
Presenters: Chris Story, Assistant City Manager
Kathy Dunleavy, President and CEO of the Mary Black Foundation
Renee Romberger, Vice President Community Health Policy and Strategy
for SRHS
- VII. **Ordinance**
 - A. **Authorizing the City of Spartanburg, South Carolina, to Execute and Deliver a Lease Purchase Agreement in an Aggregate Amount Not to Exceed \$925,000 Between the City and the Lessor Thereof to Defray the Cost of Acquiring Certain Law Enforcement Software; and Other Matters Related Thereto (Second Reading)**
Presenter: Dennis Locke, Finance Director
- VIII. **Consent Agenda**
 - A. **To Provide Certification of Beaumont Mill as a Textile Mill Site Under the South Carolina Textiles Communities Revitalization Act for the Purpose of Allowing the Developer To Qualify for State Income Tax Credits (Second Reading)**
Presenter: Chris Story, Assistant City Manager

IX. Other Business

- A. Alexander Avenue Culvert Replacement**
Presenter: Jay Squires, Streets & Storm Water Manager
- B. Transit Presentations and Discussions**
Presenter: Chris Story, Assistant City Manager

X. City Council Updates

XI. Executive Session Pursuant to Section 30-4-70 (a) (5) of the South Carolina Code to Discuss Matters Relating to Encouraging the Location of A Business in the City

XII. Adjournment

***There will be an
Appreciation Reception for Councilmember Robert Reeder
In the Main Lobby of City Hall
Immediately following the council meeting***

** City Code Sec. 2-57. Citizen Appearance. Any citizen of the City of Spartanburg may speak at a regular meeting on any matter pertaining to City Services and operations germane to items within the purview and authority of City Council, except personnel matters, by signing a Citizen's Appearance form prior to the meeting stating the subject and purpose for speaking. No item considered by Council within the past twelve (12) months may be added as an agenda item other than by decision of City Council. The forms may be obtained from the Clerk and maintained by the same. Each person who gives notice may speak at the designated time and will be limited to a two (2) minute presentation.*



**City Council Meeting
City Council Chambers
145 West Broad Street
Spartanburg, SC
Monday, November 23, 2015
5:30 p.m.**

**(These minutes are subject to approval at the
December 14, 2015 City Council meeting.)**

City Council met this date with the following members present: Mayor pro tem Erica Brown, Councilmembers Robert Reeder, Jerome Rice, Sterling Anderson, and Laura Stille. Mayor White and Councilmember Scalisi were out of town. City Manager Ed Memmott and City Attorney Cathy McCabe were also in attendance. Notice of the meeting was posted with the Media 24 hours in advance according to the Freedom of Information Act. All City Council meetings are recorded for a complete transcript.

- I. Moment of Silence - observed**
- II. Pledge of Allegiance - recited**
- III. Approval of the Minutes of the November 9, 2015 City Council Meeting –**
Councilmember Rice made a motion to approve the minutes as received.
Councilmember Reeder seconded the motion, which carried unanimously 5 to 0.
- IV. Approval of Agenda of the November 23, 2015 City Council Meeting –**
Councilmember Reeder made a motion to approve the agenda as received.
Councilmember Stille seconded the motion, which carried unanimously 5 to 0.
- V. Public Comment - none**
*Citizen Appearance forms are available at the door and should be submitted to the City Clerk
- VI. Way to Wellville Update**
Presenters: Chris Story, Assistant City Manager
Molly Talbot-Metz, Vice President of the Mary Black Foundation
Ms. Talbot-Metz updated Council on the progress and activities of Way to Wellville.
- VII. Ordinances**
 - A. Authorizing the City of Spartanburg, South Carolina, to Execute and Deliver a Lease Purchase Agreement in an Aggregate Amount Not to Exceed \$879,932 Between the City and the Lessor Thereof to Defray the Cost of Acquiring Certain Law Enforcement Software; and Other Matters Related Thereto (First Reading)**

Presenter: Dennis Locke, Finance Director

Mr. Locke presented the item to Council as follows:

“At the November 9, 2015 City Council meeting, the City Manager was given authorization to execute the necessary agreement to obtain new software for the Police Department.

ACTION REQUESTED: Staff has determined to use the lease purchase option to acquire the software. Therefore an ordinance is required to finance the project. Staff is requesting approval to enter into the lease agreement, not to exceed \$879,932, with Government Capital.

BUDGET & FINANCIAL DATA: Our initial down payment of \$60,000 will be paid from grant funds. There will be six annual payments of approximately \$155,000 thereafter.”

After discussion, Councilmember Anderson made a motion to approve the ordinance as presented on first reading. Councilmember Rice seconded the motion, which carried unanimously 5 to 0.

B. To Provide Certification of Beaumont Mill as a Textile Mill Site Under the South Carolina Textiles Communities Revitalization Act for the Purpose of Allowing the Developer To Qualify for State Income Tax Credits (First Reading)

Presenter: Chris Story, Assistant City Manager

Mr. Story presented the item to Council as follows:

“This is a housekeeping matter simply involving a restatement of an action originally approved by City Council in June 2014.

The South Carolina Textile Communities Revitalization Act provides financial incentives to support the redevelopment of the many former textile mill sites throughout the state. The program entitles the developers of qualifying projects on certified sites to receive either a credit against a portion of state taxes. The owners of the Beaumont Mill site are pursuing the state tax credits. The City must certify a site for it to be eligible.

The site qualifies with the definitions in the code and its inclusion is consistent with the intent of the program. Because this action relates specifically to taxes paid to the State, this incentive will have no effect on any local revenues derived from the site now or in the future. City Council originally approved this certification last year. Ownership of the property and the phasing of the project have since changed thereby necessitating a restatement of the certification.

We recommend your approval.”

After discussion, Councilmember Anderson made a motion to approve the ordinance as requested on first reading. Councilmember Stille seconded the motion, which carried unanimously 5 to 0.

VIII. City Council Updates

Councilmember Stille wished everyone a happy Thanksgiving.

Councilmember Rice shared pictures of the City Little League Football 8 and under, 10 and under, and 12 and under Championship and Runner Up teams.

Councilmember Reeder congratulated Councilmember Rice on the Spartanburg High School playoff victory. He shared that he presented the key to the city to Mr. William Scott at the “100 Men in Black” event the previous Sunday at Majority Baptist Church. Mayor pro tem Brown reminded everyone of the “Dickens of a Christmas” event on December 1.

IX. Executive Session Pursuant to Section 30-40-70 (a) (2) of the South Carolina Code to Receive Legal Advice Relating to the Oakview Apartments

Councilmember Stille made a motion to adjourn to Executive Session for the reason stated. Councilmember Rice seconded the motion, which carried unanimously 5 to 0. Council adjourned to Executive Session at 5:50 p.m.

Council reconvened to regular session at 6:16 p.m. Mayor pro tem Brown stated that Council received legal advice with no decisions made.

X. Adjournment

Councilmember Rice made a motion to adjourn the meeting. Councilmember Anderson seconded the motion, which carried unanimously 5 to 0. The meeting adjourned at 6:17 p.m.



Connie S. McIntyre, City Clerk



MEMORANDUM

TO: Spartanburg City Council

FROM: Chris Story, Assistant City Manager

SUBJECT: Presentation on Robert Wood Johnson Foundation Culture of Health Prize

DATE: December 9, 2015

Our community was recently recognized as one of eight winners nationally of the Robert Wood Johnson Foundation's Culture of Health Prize. This award, described more fully in the attached, is perhaps the most prestigious national recognition for collaborative efforts to improve wellbeing within a community. The City team is one of many partners in this remarkable effort.

Kathy Dunleavy, President and CEO of the Mary Black Foundation, and Renee Romberger, Vice President Community Health Policy and Strategy for Spartanburg Regional Healthcare System, two of the key leaders in this broad collaborative, will join us for brief presentation on the award at the upcoming City Council meeting.

FOR IMMEDIATE RELEASE: OCT. 28, 2015

CONTACT: Will Rothschild
(864) 596-2491
wrothschild@cityofspartanburg.org

**SPARTANBURG COUNTY, SOUTH CAROLINA RECEIVES RWJF CULTURE OF HEALTH PRIZE
FOR INNOVATIVE EFFORTS TO HELP RESIDENTS LEAD HEALTHIER LIVES**

*Robert Wood Johnson Foundation Recognizes Spartanburg County, South Carolina for
Collaborative Work to Improve Health for All*

Spartanburg County, South Carolina—Spartanburg County is one of eight winners of the 2015 *RWJF Culture of Health Prize* awarded by the Robert Wood Johnson Foundation. The Prize celebrates the strides communities have made to ensure good health flourishes for all. Announced today at RWJF headquarters in Princeton, New Jersey, Spartanburg County will receive a cash prize of \$25,000 in recognition of its commitment to building a Culture of Health.

Spartanburg County is being recognized for leveraging its unique strengths and rallying community partners around a shared vision of health. Efforts have resulted in a significant reduction in teen pregnancy rates in the county, a comprehensive neighborhood revitalization that is increasing affordable housing, education opportunities, and access to wellness services and healthy foods, increased access to healthcare and social services for low-income, uninsured residents in the county, and creative strategies to integrate behavioral health services into the community.

“Across Spartanburg County, leaders and citizens have been working together for years in an effort to address our most vexing issues of health and wellness,” said Kathy Dunleavy, President and CEO of the Mary Black Foundation. “Earning the RWJF Culture of Health Prize is confirmation of the progress we have made. We still have a lot of work to do, but, because of Spartanburg’s collaborative nature and the strong partnerships that have been developed, we should all be optimistic about the opportunity we have to build a community that is among the healthiest anywhere.”

“This year’s *RWJF Culture of Health Prize* winners are inspiring examples of communities that are weaving health into everything they do,” said Risa Lavizzo-Mourey, RWJF president and CEO. “These eight communities, and our 12 previous winners, are connecting to like-minded people across the country to build a Culture of Health movement fueled by bold ideas, collaboration, and solutions so that everyone will have the opportunity and means to live the healthiest life they can.”

Spartanburg County was selected from more than 340 prize applications across the country. The other seven winning communities are Bridgeport, Connecticut; Bronx, New York; Everett, Massachusetts; Kansas City, Missouri; Lawrence, Massachusetts; Menominee Nation, Wisconsin, and Waaswaaganing Anishinaabeg (Lac du Flambeau Tribe), Wisconsin. **Tune in to rwjf.org/Prize today at 12pm ET/9am PT for a live webcast of the Prize announcement ceremony.**

Building a Culture of Health means creating a society that gives every person, no matter who they are, the opportunity to be as healthy as they can be. To become a *RWJF Culture of Health Prize* winner, Spartanburg County had to demonstrate how it excelled in the following six criteria:

- Defining health in the broadest possible terms.
- Committing to sustainable systems changes and policy-oriented long-term solutions.
- Cultivating a shared and deeply-held belief in the importance of equal opportunity for health.
- Harnessing the collective power of leaders, partners, and community members.
- Securing and making the most of available resources.
- Measuring and sharing progress and results.

“Over the last several years, thanks to the leadership of the Mary Black Foundation, Spartanburg Regional Healthcare System and many other organizations, our community has made great strides in addressing several important health and wellness issues,” Spartanburg Mayor Junie White said. “This recognition is exciting, and it should encourage us to continue and accelerate our efforts.”

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About The Mary Black Foundation

The Mary Black Foundation is a private foundation established to improve the health of Spartanburg County, South Carolina. Since 2003, the Foundation’s work has centered on advancing two priority areas: Early Childhood Development and Healthy Eating | Active Living. For more information, visit www.maryblackfoundation.org. Follow the Foundation on Twitter @MaryBFoundation.

About the Robert Wood Johnson Foundation

For more than 40 years the Robert Wood Johnson Foundation has worked to improve the health and health care of all Americans. We are striving to build a national Culture of Health that will enable all Americans to live longer, healthier lives now and for generations to come. For more information, visit www.rwjf.org. Follow the Foundation on Twitter at [www.rwjf.org/twitter](https://twitter.com/rwjf) or on Facebook at www.rwjf.org/facebook.

About the University of Wisconsin Population Health Institute

The [University of Wisconsin Population Health Institute](http://uwphi.pophealth.wisc.edu) is the focal point within the University of Wisconsin School of Medicine and Public Health to address questions of what it takes to improve health across the population. The Institute advances health and well-being for all by developing and promoting evidence-informed approaches to policy and practice at the local, state, and national levels. The Institute leads the work on the *County Health Rankings & Roadmaps* and manages the *RWJF Culture of Health Prize*. For more information, visit <http://uwphi.pophealth.wisc.edu>.



REQUEST FOR COUNCIL ACTION

TO: Ed Memmott, City Manager
FROM: Dennis R. Locke, Finance Director
SUBJECT: Capital Lease Financing – Spillman Technologies
DATE: November 19, 2015

BACKGROUND:

At the November 9, 2015 City Council meeting, the City Manager was given authorization to execute the necessary agreement to obtain new software for the Police Department.

ACTION REQUESTED:

Staff has determined to use the lease purchase option to acquire the software. Therefore an ordinance is required to finance the project. Staff is requesting approval to enter into the lease agreement, not to exceed \$925,000 with Government Capital. Our Bond Counsel advised us to increase the amount not to exceed based on the gross amount of the financial transaction.

BUDGET & FINANCIAL DATA:

Our initial down payment of \$60,000 will be paid from grant funds. There will be six annual payments of approximately \$155,000 thereafter.

ORDINANCE

AUTHORIZING THE CITY OF SPARTANBURG, SOUTH CAROLINA, TO EXECUTE AND DELIVER A LEASE PURCHASE AGREEMENT IN AN AGGREGATE AMOUNT NOT TO EXCEED \$925,000 BETWEEN THE CITY AND THE LESSOR THEREOF TO DEFRAY THE COST OF ACQUIRING CERTAIN LAW ENFORCEMENT SOFTWARE; AND OTHER MATTERS RELATED THERETO.

BE IT ORDAINED BY THE MAYOR AND MEMBERS OF COUNCIL OF THE CITY OF SPARTANBURG, SOUTH CAROLINA, IN COUNCIL ASSEMBLED:

Section 1. Findings and Determinations. The City Council (the “Council”) of the City of Spartanburg, South Carolina, hereby finds and determines:

(a) The City of Spartanburg, South Carolina (the “City”) is an incorporated municipality located in Spartanburg County, South Carolina, and as such possesses all powers granted to municipalities by the Constitution and the laws of this State.

(b) Section 5-7-40 of the Code of Laws of South Carolina, 1976, as amended (the “S.C. Code”) empowers all municipalities to own and possess real and personal property and such municipalities may lease any such property.

(c) The City desires to enter into a lease-purchase agreement (the “Lease Agreement”) with Government Capital Corporation (the “Lessor”) for the purpose of financing the acquisition of certain Law Enforcement Software (the “Software”).

(d) The Lease Agreement will not constitute a “financing agreement” and the Software will not constitute an “asset” as such terms are defined in Section 11-27-110 of the S.C. Code. Thus, the amount of the Lease Agreement will not be included when calculating the City’s constitutional debt limit under Article X, Section 14 of the Constitution of the State of South Carolina.

(e) The Lease Agreement will be subject to annual appropriation by the Council.

(f) It is in the best interest of the City to acquire the Software by entering into the Lease Agreement. The Lease Agreement will enable the City to acquire the Software which will provide services necessary or useful to the operations of the City government.

Section 2. Approval of Lease/Purchase Financing; Authorization to Determine Certain Matters Relating to the Lease/Purchase Financing. The Software shall be acquired pursuant to the Lease Agreement with the Lessor which is hereby approved in an aggregate principal amount of not exceeding \$925,000. The Council hereby authorizes the City Manager to (a) determine the principal amount of the Lease Agreement; (b) determine the payment schedule under the Lease Agreement; (c) determine if the Lease Agreement shall be issued on a federally taxable or tax-exempt basis; and (d) determine if the Lease Agreement shall be designated as a “qualified tax-exempt obligation: for purposes of Section 265 of the Internal Revenue Code of 1986 relating to the ability of financial institutions to deduct from income for federal income tax purposes interest expense that is allocable to carrying and acquiring tax-exempt obligations.

Section 3. Approval of Lease Agreement. Without further authorization, the City Manager is authorized to approve the form, terms and provisions of the Lease Agreement. The City Manager is hereby authorized, empowered and directed to execute, acknowledge and deliver the Lease Agreement in the name and on behalf of the City. The Lease Agreement shall be in the form as shall be approved by the City Manager, the City Manager’s execution thereof to constitute conclusive evidence of such approval.

Section 4. Execution of Documents; Written Procedures. The Mayor, Mayor Pro Tempore, City Manager, Finance Director, City Attorney and Municipal Clerk are fully empowered and authorized to take such further action and to execute and deliver such additional documents as may be reasonably requested by the Lessor to effect the delivery of the Lease Agreement, in accordance with the terms and conditions therein set forth, and the transactions contemplated hereby and thereby, and the action of such officers in executing and delivering any of such documents, in such form as the Mayor or City Manager shall approve, is hereby fully authorized. In addition, the Mayor, Mayor Pro Tempore, City Manager and Finance Director, or any of them acting alone, are further authorized and directed to adopt written procedures on behalf of the City to ensure the City’s compliance with federal tax matters relating to the Lease Agreement to the extent that such Lease Agreement is issued on a federal tax-exempt basis.

Section 5. Federal Tax Covenant. With respect to any Lease Agreement which is issued on a federal tax-exempt basis, the City, as lessee, agrees and covenants that it will not take any action which will, or fail to take any action which failure will, cause interest components of the payments to be made under such Lease Agreement to become includable in the gross income of the Lessor or its successors or assignees for federal income tax purposes pursuant to the provisions of the Internal Revenue Code of 1986, as amended (the “Code”) and regulations promulgated thereunder in effect on the date of original issuance of such Lease Agreement, and that it will comply with all applicable provisions of Section 103 and Sections 141 through 150 of the Code and any regulations promulgated thereunder, to maintain the exclusion from gross income for federal income tax purposes of the interest portion of the payments to be made under such Lease Agreement; and to that end the City shall:

- (a) comply with the applicable provisions of Section 103 and Sections 141 through 150 of the Code and any regulations promulgated thereunder so long as such Lease Agreement is outstanding;

- (b) establish such funds, make such calculations and pay such amounts in the manner and at the times required in order to comply with the requirements of the Code relating to required rebates of certain amounts to the United States; and
- (c) make such reports of such information at the times and places required by the Code.

The City will timely file Form 8038-G for such Lease Agreement in accordance with the applicable regulations of the Internal Revenue Service.

Section 6. Filings with Central Repository. In compliance with Section 11-1-85 of the S.C. Code, the City covenants that it will file or cause to be filed with a central repository for further availability in the secondary bond market when requested: (a) a copy of the annual audit of the City within thirty (30) days of the City's receipt thereof; and (b) within thirty (30) days of the occurrence thereof, relevant information of an event which, in the opinion of the City, adversely affects more than five (5%) of the City's revenue or its tax base.

Section 7. Severability. All ordinances, orders, resolutions and parts thereof, procedural or otherwise, in conflict herewith or the proceedings authorizing the execution of the Lease Agreement are, to the extent of such conflict, hereby repealed.

Section 8. Effective Date. This Ordinance shall be effective upon its enactment.

[Execution Page Follows]

DONE AND RATIFIED this ____ day of _____, 2015

CITY OF SPARTANBURG, SOUTH CAROLINA

MAYOR

ATTEST:

CITY CLERK

Date of First Reading: _____

Date of Second Reading: _____

This Ordinance has been reviewed by me and is hereby approved as to form and legality.

City Attorney, City of Spartanburg, South Carolina



REQUEST FOR COUNCIL ACTION

TO: Ed Memmott, City Manager
FROM: Jay Squires, Streets & Storm Water Manager
SUBJECT: Alexander Avenue Culvert Replacement
DATE: December 1, 2015

BACKGROUND

Staff received bids for the replacement of a culvert on Alexander Avenue. This project consists of removal and replacement of a culvert from under Alexander Avenue between Marion Avenue and Winsmith Avenue.

The following bids were submitted:

Capitol Construction of the Carolinas, LLC. (Spartanburg)	\$150,137
Martin & Son Contracting, Inc. (Spartanburg)	\$170,030
North American Pipeline Management, Inc. (Columbia, S.C.)	\$179,649
Davis Grading, Inc. (Shelby, N.C.)	\$276,476

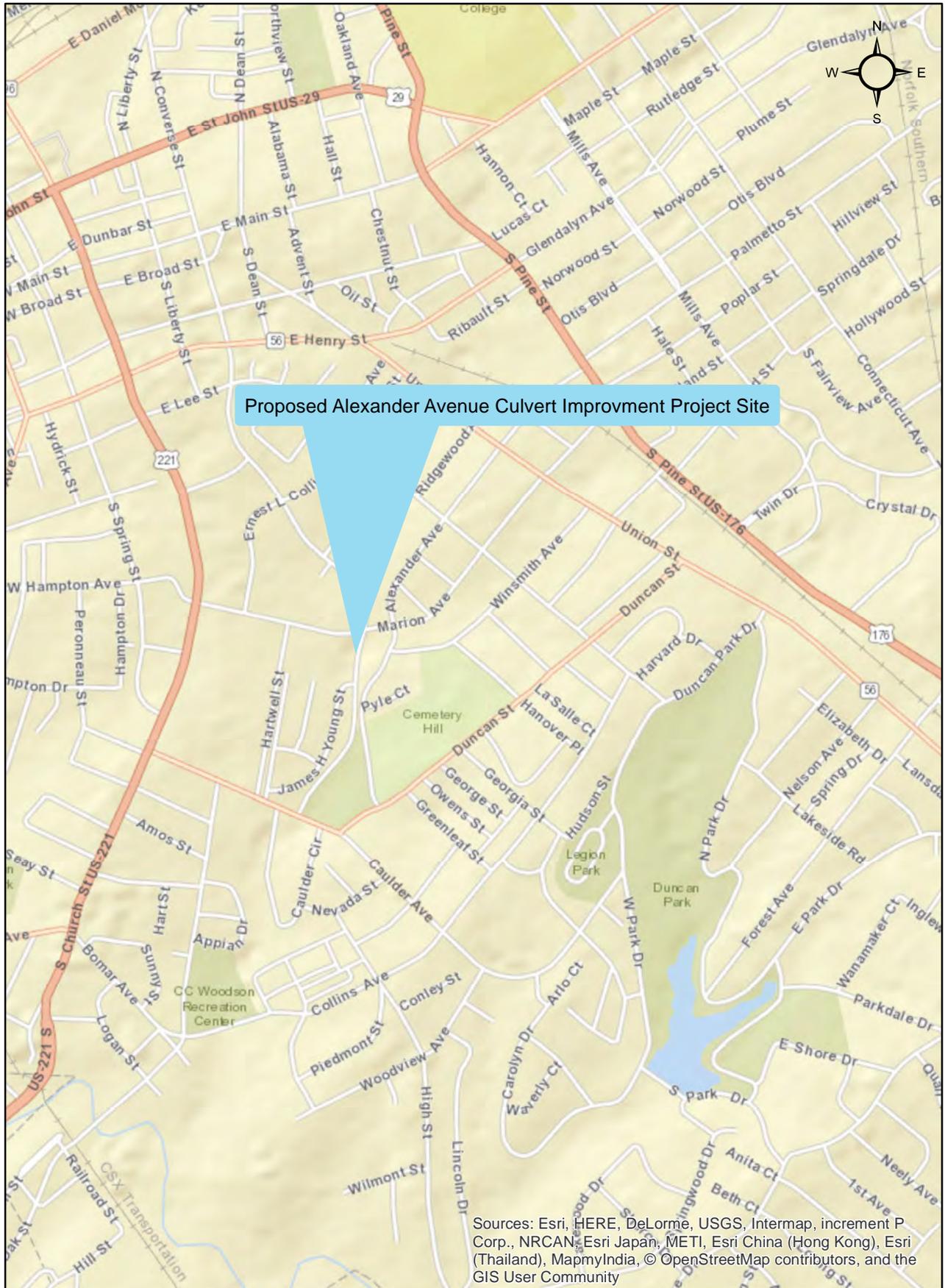
Staff has reviewed the bids and the qualifications for each of these contractors. Based on that review, staff has determined that, Capitol Construction of the Carolinas, LLC. is the responsive low bidder. No bids were submitted from MWBE certified contractors. It is anticipated that it will take 30 days (depending on weather) to complete this project. Staff will give neighborhood residents advance notice using door hangers and mailers. A portion of Alexander Avenue will be closed during construction for safety reasons. A detour route will be in place for convenience while the segment of road is closed.

ACTION REQUESTED:

Allow staff to accept the bid from Capitol Construction of the Carolinas, LLC and authorize the City Manager to enter into a contract with, Capitol Construction of the Carolinas, LLC for the completion of the project.

BUDGET AND FINANCE DATA:

\$ 150,137 from the Storm Water Utility fund will be used to complete the project.



Proposed Alexander Avenue Culvert Improvement Project Site

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community







MEMORANDUM

TO: Spartanburg City Council
FROM: Chris Story, Assistant City Manager
SUBJECT: Transit Presentations and Discussion
DATE: December 9, 2015

Over the past few months, staff has been reviewing various aspects of our public transit services. We intend to share that information with you at the upcoming City Council meeting. Specifically, this session will contain the following:

1. Staff will provide a brief overview of the city's SPARTA system.
2. Dr. Eric Morris of Clemson University's City and Regional Planning Department and his students will present a report on the Sparta Customer Satisfaction Survey they conducted earlier this fall.
3. Bill Harned, Area Vice President of First Transit (the transit management firm contracted to manage the Sparta system) will present findings and recommendations from a review of routes and schedules also conducted this fall.
4. Questions and discussion.

Related documents are enclosed. Collectively, we believe this information will enable City Council to better understand options for improving services. We envision that formal consideration and approval of any changes would occur in early 2016. We look forward to any questions you may have.

Overview of Public Transit Services in Spartanburg County, SC

The greater Spartanburg community is served by two public transit systems which have distinct operating models, service objectives, and geographies.

- *SPARTA* is the City of Spartanburg's fixed route bus system. It consists of eight loop routes that each arrive at the downtown passenger center on a 30 minute or 60 minute frequency. The routes contain stops throughout the City as well as some areas and destinations outside the City limits. The Downtown Passenger Center is the system's only transfer point.
 - Last year, SPARTA was used for 457,758 individual trips.
 - Federal and state funds provide roughly 2/3 of the cost of operating the system with the City making up the rest (approximately \$500,000 annually in recent years) from the City's General Fund.
- The *Spartanburg County Transportation Services Bureau (TSB)* operates a demand response, or "dial-a-ride," service available to all residents of the County (including, of course, City residents) with the purpose of helping people get to health and human services and to jobs. Users call 24-hours in advance to schedule and are charged fares ranging from \$3.00 to \$8.50 depending on their proximity to the center of the County. TSB operates under the authority of the County government. The County has contracted with the Spartanburg Regional Healthcare System to operate the system.
 - TSB is used for an estimated 143,000 trips annually including contracted services to special populations and free or reduced cost rides for Medicaid approved citizens to Medicaid approved destinations, which constitute a large portion of TSB services.
 - TSB provides paratransit services to the disabled in the City (less than 1% of TSB trips) which SPARTA would otherwise be required to provide.
 - Federal and state funds combined with generated revenues fund the operations. Aside from a portion of the costs of one professional staff member the County employs to administer transit related grant funding, there is no other investment of local tax proceeds into the TSB.
- **Grant Funding:** FTA's largest funding program available for local use (Section 5307: Urbanized Area Formula Program) can be utilized for either demand response or fixed route service at the community's discretion according to local priorities and needs. For many years, these funds (\$2,055,428 in FY15) have been allocated 50% to SPARTA and 50% to TSB. In addition, TSB is eligible to receive Section 5310: Elderly and Disabled Funds and Section 5311: Rural Transit. In 2015 Sparta received \$1,027,714 in federal funds and TSB received \$1,558,299.



SPARTA CUSTOMER SATISFACTION SURVEY 2015

Clemson University
CRP 814 Class
Clemson, SC

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Chapter 1 Executive Summary

The following report summarizes the findings from the Spartanburg Area Regional Transit Agency (SPARTA) rider satisfaction survey that was implemented during October 2015 by Clemson University students in the MCRP 814 Public Transportation course, led by Professor Eric A. Morris. The goal was to gain insight into customer thought processes and to better understand riders and their needs.

The study was conducted on all of SPARTA's eight fixed bus routes over the course of weekdays and weekends. Two hundred and thirty-seven surveys were collected by approaching every rider who entered the bus with a request to complete the two-page survey. The survey included questions about satisfaction with the bus ride itself, bus stops, bus fares, the transit center, and the website, as well as rider demographics, trip purpose, and access/egress modes. The survey ended with a chance for the respondents to provide open-ended comments.

Majorities of SPARTA rider participants in the study were female, African American, and between 35-49 years old. They typically rode the bus five or more times per week, were going to their place of employment, and rode the bus because they did not have access to a personal vehicle.

Overall, riders are satisfied with SPARTA service. Survey respondents are most satisfied with the value and ease of payment of bus fares. Relative to other factors, respondents are somewhat less satisfied with the transit center, the reliability of bus transfers, and the SPARTA website. Several riders expressed enthusiasm for SPARTA service in the comments section. On the downside, a main preoccupation of SPARTA riders is the desire for buses to run later into the evening. More weekend service, expansion of geographic range, renovation of bus stops, and improving the website are also common concerns. Still, in all, SPARTA is doing a good job of satisfying its customers.

Chapter 2 Introduction

The Spartanburg Area Regional Transit Agency (SPARTA) provides public transit service for the city of Spartanburg, connecting areas within the city as well as several others outside the city limits. In recent times, SPARTA has been making efforts to learn about its customer base and determine their likes and dislikes about the service. As a result, SPARTA, along with a team from Clemson University, decided to conduct this customer satisfaction survey in the fall of 2015 to gain insight into customer thought processes and to better understand riders and their needs. The purpose of the Customer Satisfaction Survey is to gauge how satisfied SPARTA's riders are with a variety of aspects of SPARTA's service, identify service aspects where SPARTA is succeeding, and determine where service might be improved. The report also gives SPARTA a chance to learn about which aspects of service are the key drivers of customer satisfaction and which may be less important. Aspects of service covered include factors relating to bus travel (such as driver friendliness and schedule convenience), aspects of bus stops (such as safety and cleanliness), issues with fares (such as perception of value), characteristics of the

transit center (such as the ease of making connections), and overall satisfaction. Customers were asked their opinions about 22 aspects of service, which they ranked on a 1-5 Likert scale, plus an open-ended section where they could write their own comments. Customers also provided demographic information about themselves.

All of SPARTA's 8 routes (1-Westgate, 2-Hillcrest, 3-N. Church Street, 4-S. Church Street, 5-Spartanburg Community College, 6-S. Liberty Street, 7-Crestview, 8-Dorman Centre) were surveyed successfully, with the exception that due to an error information on routes 3 and 4 are pooled below. Two hundred thirty-seven responses were collected. The questions were carefully worded, tested, and organized according to the various service dimensions in order to make it comfortable for the riders to complete the survey. In addition, there was an open-ended comments section.

This report contains results and analysis of this data, and draws conclusions from it. It covers the demographics of the survey group, data on all of the questions showing average satisfaction scores for different attributes, an analysis of the overall satisfaction score as it relates to customer demographics, and an analysis of the comments and suggestions provided by the riders. The report also contains a quadrant chart which shows which aspects of service are important to riders and how SPARTA fares in terms of satisfaction with each. A multiple regression analysis model was used to obtain the derived importance coefficients. In sum, this report provides a roadmap outlining where SPARTA is succeeding and where it might be able to better serve its customers.

Chapter 3 Literature Review

The *Transit Capacity and Quality of Service Manual* (TCQSM) outlines many quality of service aspects that are important in understanding transit rider satisfaction.ⁱ This gives transit agencies the opportunity to better understand their riders and demonstrates what the organizations can do to better serve customers. Rider opinions are not the only factor that should be taken into account when planning service since agencies have limited resources, so a balance between satisfying riders and fiscal feasibility must be achieved.

Even though transit may be the only method of travel, outside of walking, for the majority of transit riders, transit organizations should still seek to provide high quality service. This could open up doors for riders in terms of accessing jobs, school, and other basic needs that are essential for their quality of life. Providing quality service may also help the transit agency attract and retain new riders, which may have benefits for congestion, air pollution, and more.

As outlined in the TCQSM, several rider satisfaction studies have been conducted that have helped determine factors that are important to riders. One project surveyed an urban rail system, a suburban bus system, and a small city bus system asking riders to "rate 46 transit system attributes on a scale of 1 to 10 and to identify whether they had experienced a problem with that attribute within the last 30 days."ⁱⁱ The attributes were aggregated into nine categories: comfort, nuisances, scheduling, fares, cleanliness, in-person information, passive information, safety, and transfers. People were least satisfied with fares and scheduling, while respondents were least concerned with nuisances.

The Florida Department of Transportation (FDOT) conducted a study investigating existing problems and potential problems for six Florida transit systems.ⁱⁱⁱ The study consisted of 22 factors, including hours of service, frequency of service, convenience of routes, on-time performance, travel time, transferring, cost, information availability, vehicle cleanliness, ride comfort, employee courtesy, perceptions of safety, bus stop locations, and overall satisfaction. The most significant problems were hours of service, headways, and routes, while significant potential problems also included bus ride comfort, printed schedules, and safety and cleanliness.

Another project was conducted by five different transit agencies around the U.S., asking riders to rate their trip satisfaction, both overall and in terms of specifics.^{iv} The report noted that “It was possible... to develop relationships between satisfaction with specific quality of service factors (e.g., frequency) and the conditions that surveyed passengers experienced.”³ Riders often stated frequency was the most important factor contributing to their overall satisfaction, and reliability, wait time, access, and service span were also important.

Figure 3-1 Factors Contributing Most to Stated Overall Satisfaction with a Transit Trip

Rank	<u>System</u>				
	A	B	C	D	E
1	frequency	frequency	frequency	frequency	frequency
2	wait time	reliability	close to home	reliability	wait time
3	reliability	wait time	reliability	close to home	close to home
4	close to home	close to dest.	wait time	close to dest.	reliability
5	service span	close to home	close to dest.	wait time	service span
6	close to dest.	service span		service span	
7	friendly drivers				

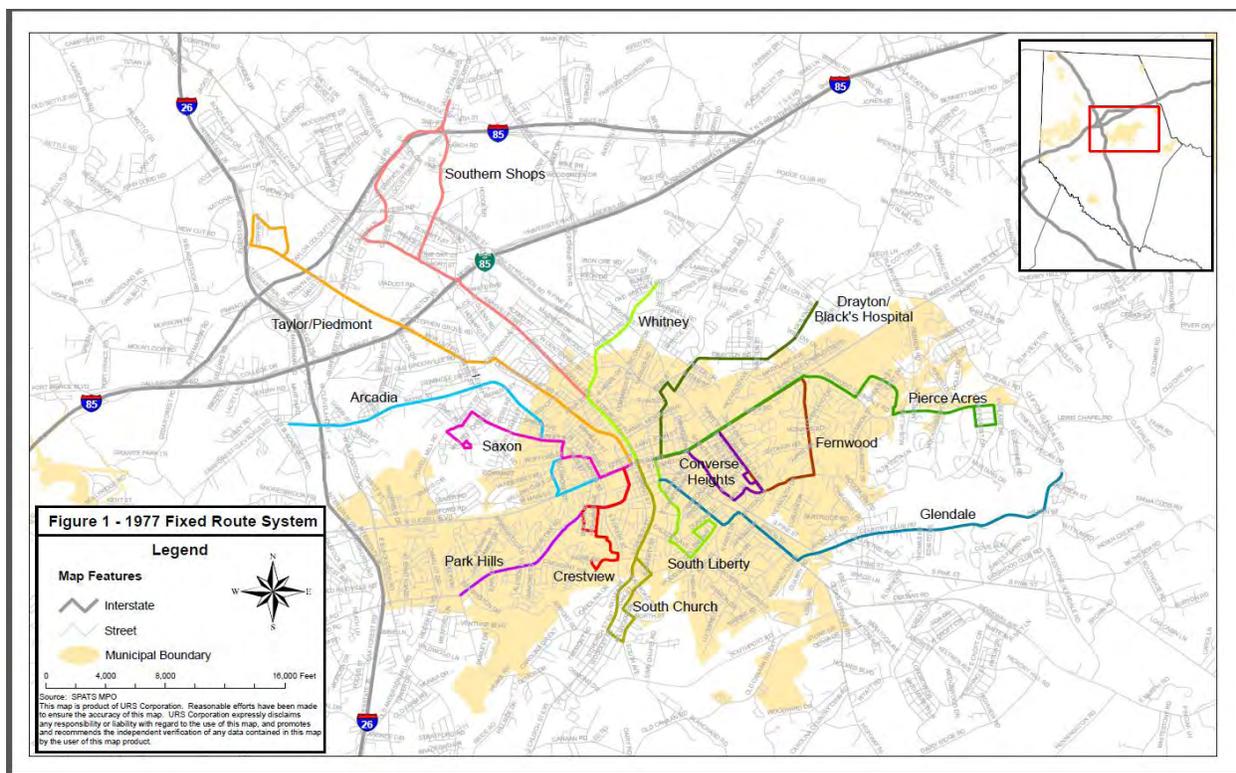
Through careful review of these studies, the survey team constructed a survey including most of the factors used in previous research to measure rider satisfaction, although frequency and reliability were omitted from the closed-ended questions in this study.

Chapter 4 Setting

The Spartanburg Area Transit Agency (SPARTA) has been in service for more than two decades. SPARTA provides service primarily within the city limits of Spartanburg. Transit service was established in Spartanburg around the beginning of 20th century. Prior to World War I, Spartanburg was bustling, with nearly 20 miles of electric streetcar passenger rail service. Mr. James Buchanan Duke was the central figure behind the development of rail lines from Anderson to Greenville and Spartanburg. The Duke Power Company played a key role in integration of public bus service into the system in the 1920’s. Duke Power provided bus service in Spartanburg until 1991.

According to *A Transit Development Study for Spartanburg, South Carolina*,^v as of 1977 there were fourteen fixed routes operating from 6 AM to 7 PM Monday through Saturday. The majority of these routes were two-way service and there was a limited number of loop routes in the system. This stands in contrast to today's system, which includes more loops, hence many passengers have to ride longer distances prior to arriving at their destinations. The system's capital stock included 16 total vehicles, with 12 of those used in maximum service. All the buses were maintained by the Duke Power Company. The transfer center did not exist in the year 1977. The most popular potential improvements suggested by this study were benches/shelters at bus stops, Sunday service, more evening service, more frequent midday service, new buses with air conditioning, lower steps on buses and easier transfers downtown. The Spartanburg transit system was successful in meeting some, though not all, of the recommendations.

Figure 4-1 1977 Fixed-Route System

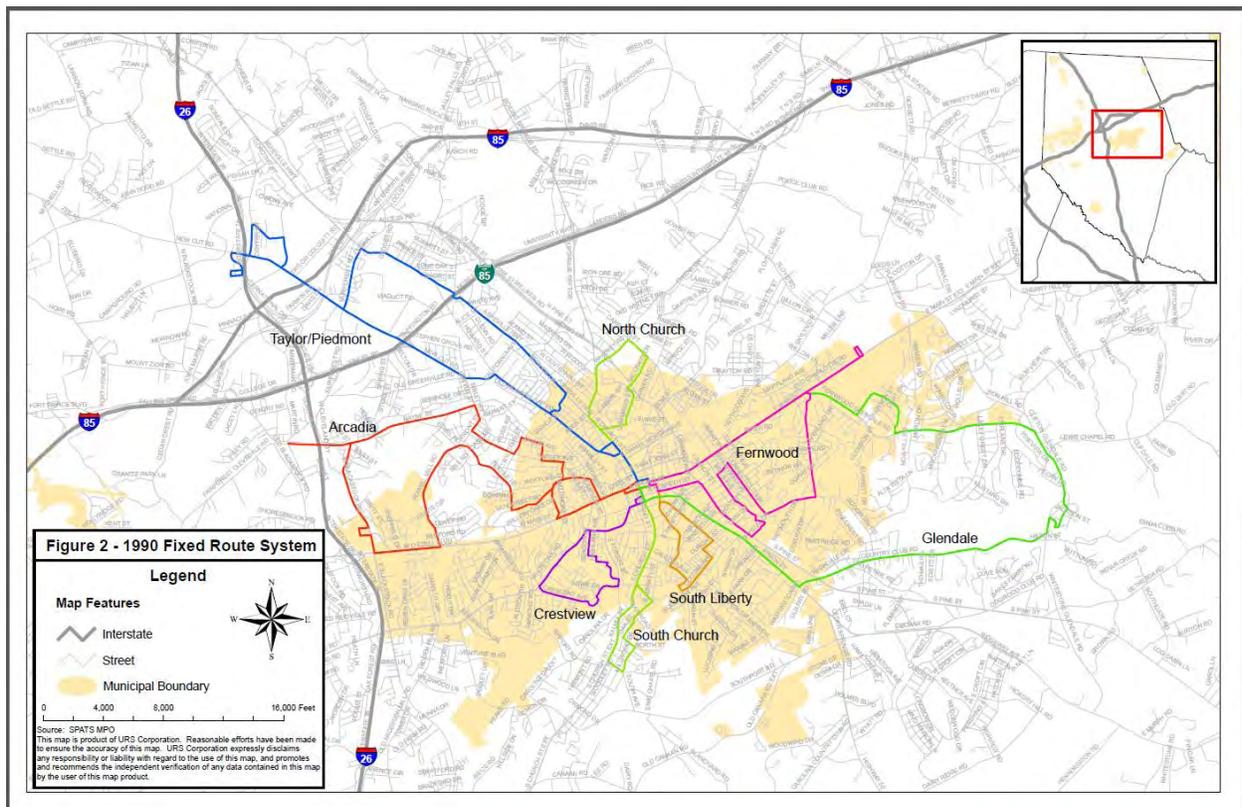


In 1991, the Spartanburg system was converted into the public system that is now run in the city. A 1991 study, the *Transit Needs Assessment and Financing Plan for Spartanburg County, South Carolina*^{vi} was conducted to find a way to continue transit service in Spartanburg with Duke Power no longer running the system, since Duke had concluded that providing transit was no longer a profitable venture. In the year 1990 revenue received through the fare box covered only about 1/3 of the operating costs, and as a private company Duke was not eligible for any government assistance. Hence Duke had responded to increasing deficits by reducing service. The study outlined the transferring the system from Duke to the city and/or county, including a five-year capital and operational budget and an action plan for this purpose. This conversion was

completed successfully; the city of Spartanburg ultimately took ownership of the capital assets and oversight of the system, a structure which is very similar to today's service. Today the system is publically owned with public and private operation.

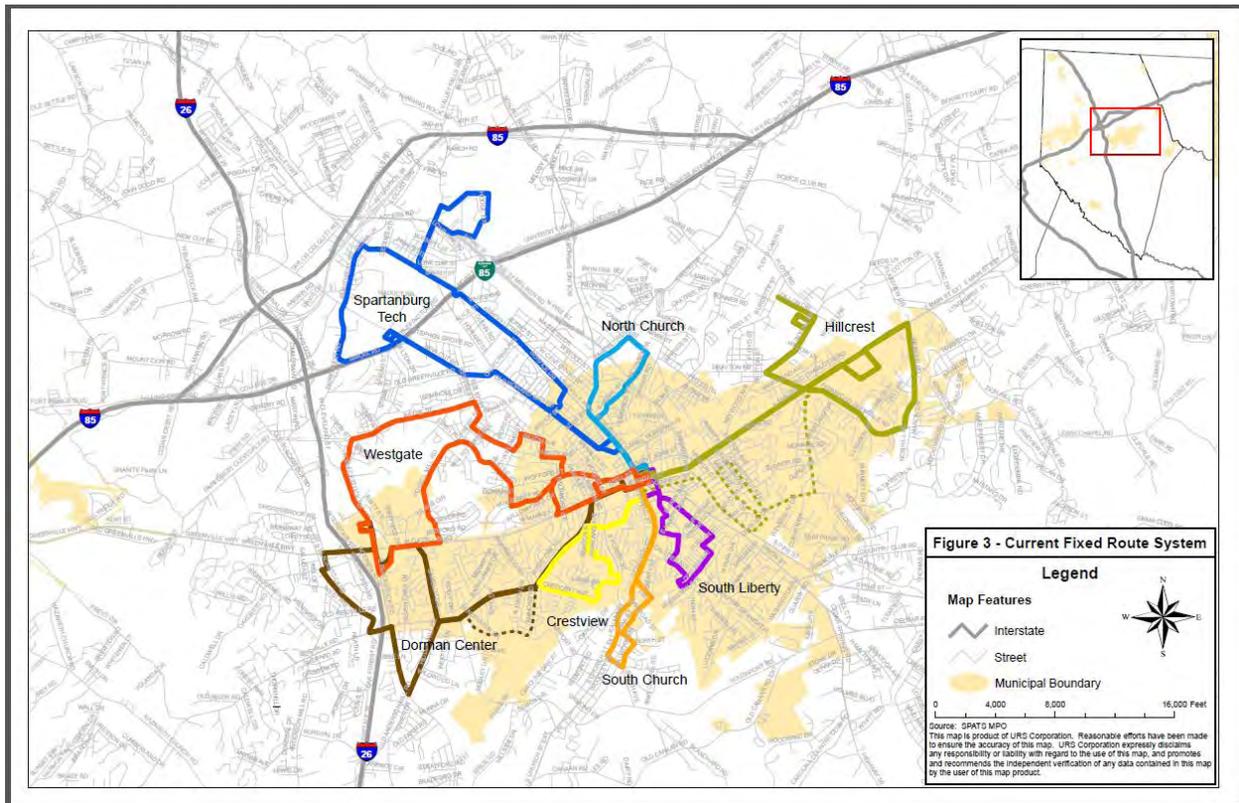
Many transit agencies are governed by an appointed board of non-elected officials. SPARTA does not have a board such as this. Instead, The Spartanburg City Council currently provides oversight for SPARTA. The city also provides financial planning and management assistance to the agency. SPARTA, since the beginning of its existence, has contracted with First Transit for management of the day-to-day operation of the system.

Figure 4-2 1990 Fixed-Route System



The operations and maintenance facility which was recommended by 1977 study came into existence in the year 2004; this facility houses the administrative offices for the general manager and staff, and the bus maintenance bays. The transfer center was also one of the recommendations of the 1977 study; it came into existence in the year 2003. In terms of service, today SPARTA utilizes a maximum of eight out of its eleven transit vehicles on eight fixed routes. The SPARTA system uses marked bus stops for its passengers.

Figure 4-3 Current Fixed-Route System



The average age of SPARTA’s fleet is 5.33 years. The average speed of vehicles is 13.1 mph. SPARTA has a total of roughly 500,000 passenger trips annually. An average of 24 passenger trips are made in a bus revenue hour. According to a review conducted as part of the master plan process in 2012, SPARTA does well in terms of the amount of service provided per revenue hour and revenue mile.^{vii} However, areas identified for improvement are bus frequency (most routes run with hour headways) and schedule span (night service is not provided and service is truncated on the weekends). The master plan also identified information for customers (in terms of route maps, advertising, and bus stop signage and shelters) as an area that could be improved.

Chapter 5 Survey Development and Administration

This customer satisfaction survey was developed and administered as a collaborative effort between Clemson students in the MCRP 814 Public Transportation course, supervised by Professor Eric A. Morris and SPARTA. The research team consulted transit ridership satisfaction studies from Chicago Metra and RTA to help design the initial survey questions. Through an iterative process in consultation with SPARTA, the team narrowed down the list of questions to be asked on the survey, bearing in mind the length of the document in order to not overburden respondents. Considerable effort went into the clarity of wording. Next, each student tested the survey on two individuals and the team used their feedback to improve the survey. After another iteration, a pilot study was conducted where two students tested out the survey on the Westgate

and Hillcrest lines. The pilot was deemed to be successful, and the survey was ready for system-wide administration.

The survey was conducted by eight graduate students between September 28 and October 17. Each survey administrator spent a day riding the bus and handing out the survey to each rider after a brief introduction. Most riders were willing and able to participate in the survey, resulting in a high response rate and a survey sample that reasonably represents the SPARA rider population. The survey team was able to reach 237 riders on all eight lines served by SPARTA. The survey was offered in both English and Spanish.

For all of the closed-ended satisfaction questions, respondents were asked to rate SPARTA service on a 5-point Likert scale.

Chapter 6 Demographics of the Sample

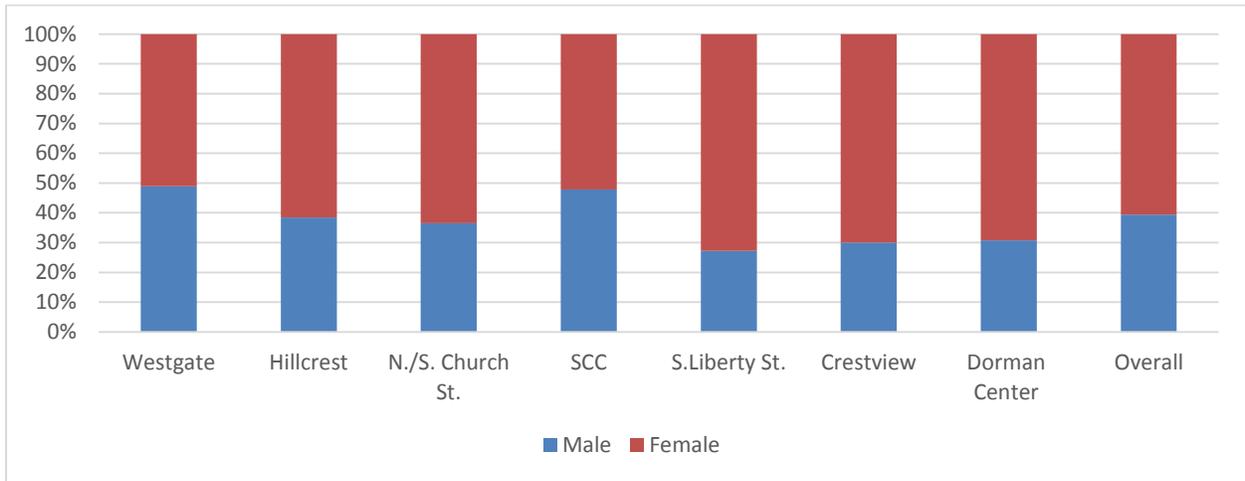
The following questions related to demographics were asked on the survey.

Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female	About how frequently do you ride the bus?
Current bus route	_____	<input type="checkbox"/> Five or more days a week
Age	_____	<input type="checkbox"/> 3-4 days a week
Home ZIP Code	_____	<input type="checkbox"/> 1-2 days a week
Race/Ethnicity	<input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> Hispanic <input type="checkbox"/> Asian <input type="checkbox"/> Other	<input type="checkbox"/> A few times a month
What is your main reason for riding the bus? (Check one)	<input type="checkbox"/> No access to a car <input type="checkbox"/> Bus is inexpensive <input type="checkbox"/> Less stress/hassle	<input type="checkbox"/> Once a month or less <input type="checkbox"/> Bus saves time <input type="checkbox"/> Hard to park where I'm going <input type="checkbox"/> Help the environment <input type="checkbox"/> Other
What is the purpose of your trip? <input type="checkbox"/> Social/Recreation <input type="checkbox"/> Childcare (school, daycare, etc) If "other," please describe:	<input type="checkbox"/> Work <input type="checkbox"/> Shopping <input type="checkbox"/> Other	<input type="checkbox"/> School <input type="checkbox"/> Medical <input type="checkbox"/> Home
How did you travel to the bus stop?	<input type="checkbox"/> Walk <input type="checkbox"/> Bike <input type="checkbox"/> Dropped off by another driver <input type="checkbox"/> Car I drove <input type="checkbox"/> Taxi/Uber <input type="checkbox"/> Other: _____	
At the end of the bus ride, how will you get to your final destination?	<input type="checkbox"/> Walk <input type="checkbox"/> Bike <input type="checkbox"/> Will be picked up by another driver <input type="checkbox"/> Car I will drive <input type="checkbox"/> Taxi/Uber Other: _____	

Gender

Females accounted for 61% of the survey's respondents. Female respondents outnumbered males on all eight lines. However the Spartanburg Community College line had nearly as many male as female respondents.

Figure 6-1 Gender by Line

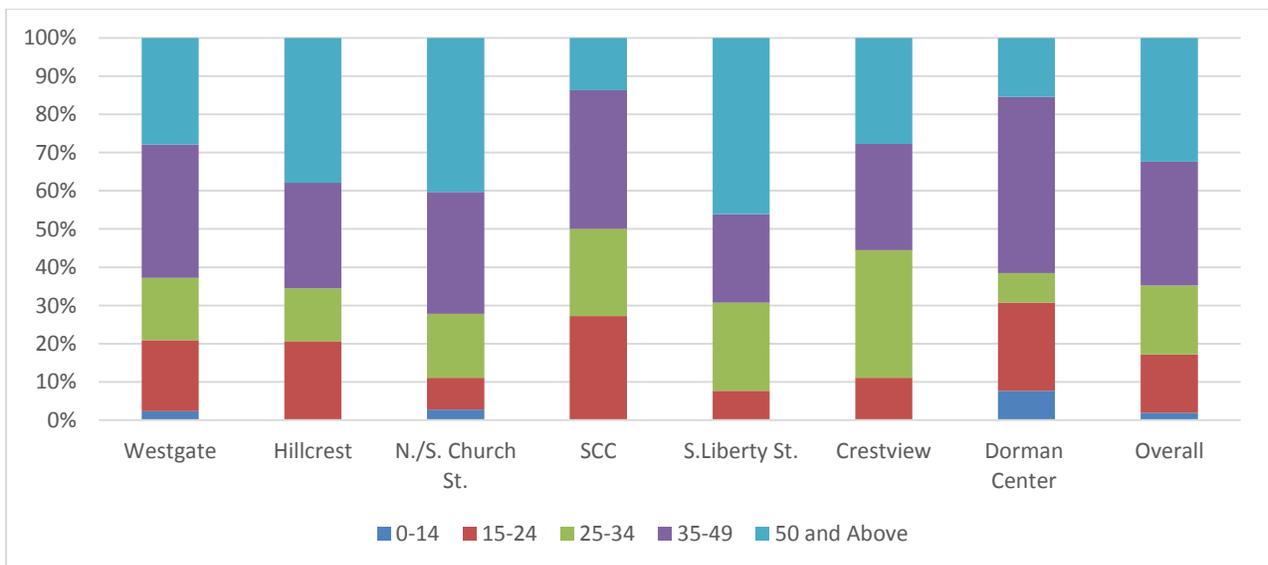


Age

The survey pool was concentrated in the age groups 35-49 and 50 and above. The sample’s age distribution for each of the lines was close to the overall distribution for the system, with a few exceptions.

- Half of the respondents were in the under 35 age group on the Spartanburg Community College line.
- Relatively fewer respondents were in the 50 and above age group on the Spartanburg Community College line.
- Relatively more respondents were in the 50 and above group on the S. Liberty St. line.

Figure 6-2 Age by Line

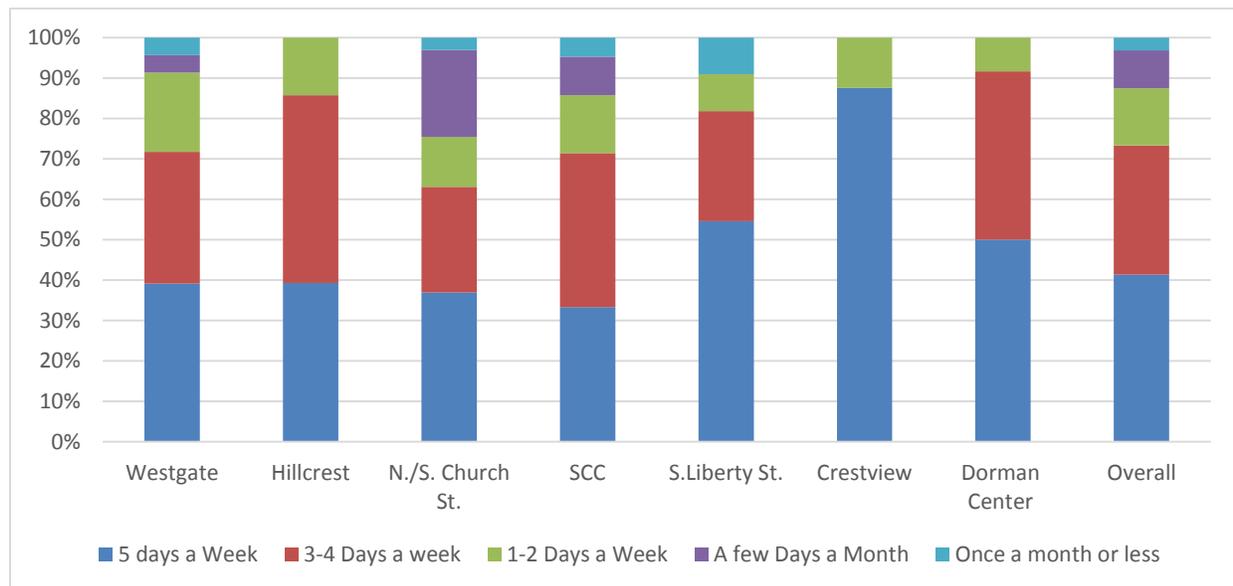


Frequency of Ridership

The greatest proportion of survey respondents ride the bus five days a week. Few respondents ride rarely. The distribution of ridership frequency is not the same for all the lines.

- The Westgate, Hillcrest, N. Church St. & S. Church St., and SCC lines have almost equal shares of passengers riding the bus five days a week.
- S. Liberty St, Crestview and Dorman Centre have a higher proportion of passengers riding the bus five days a week.
- The Crestview line has more than 85% of respondents riding the bus five days a week.
- N. Church St. & S. Church St. have the highest proportion of occasional riders (a few days a month to once a month or less).

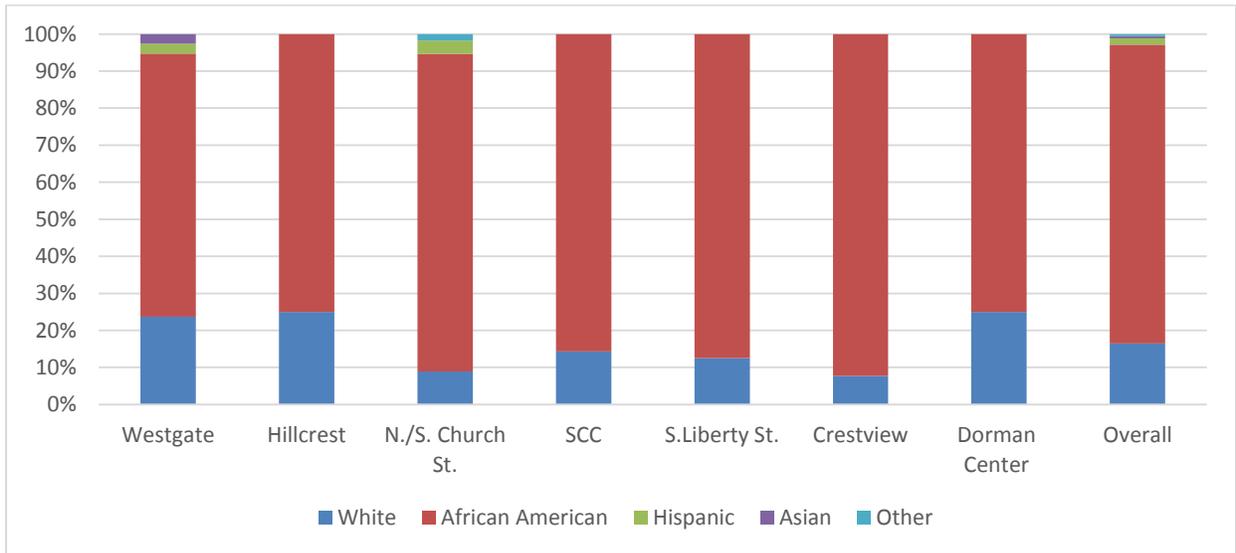
Figure 6-3 Rider Frequency by Line



Race

African Americans comprised the majority of respondents on all eight lines. Whites were the second most prevalent group, followed by a few Hispanics on the Westgate and N. Church St. & S. Church St. lines.

Figure 6-4 Race by Line



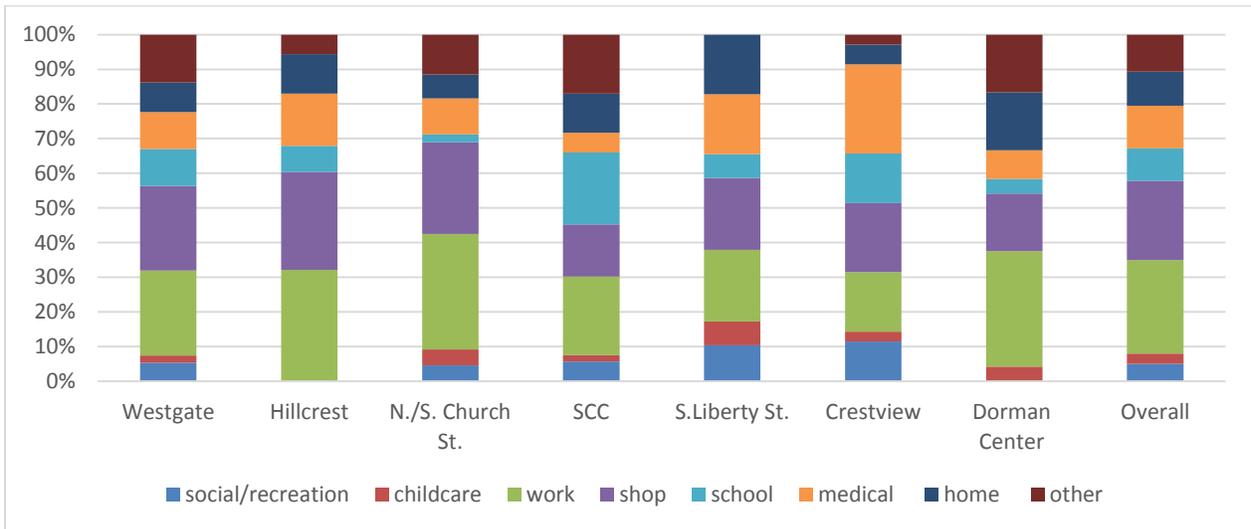
Trip Purpose

Survey respondents were riding SPARTA for a variety of purposes. Different lines have different trip purpose distributions.

- All the lines have work and shopping trips accounting for good share of the total trips.
- School and medical trips accounted for considerable share on all eight lines. The SCC line had a high share of school trips, while the Crestview line had a high share of medical trips.

Note that trips with multiple purposes were categorized as “other.”

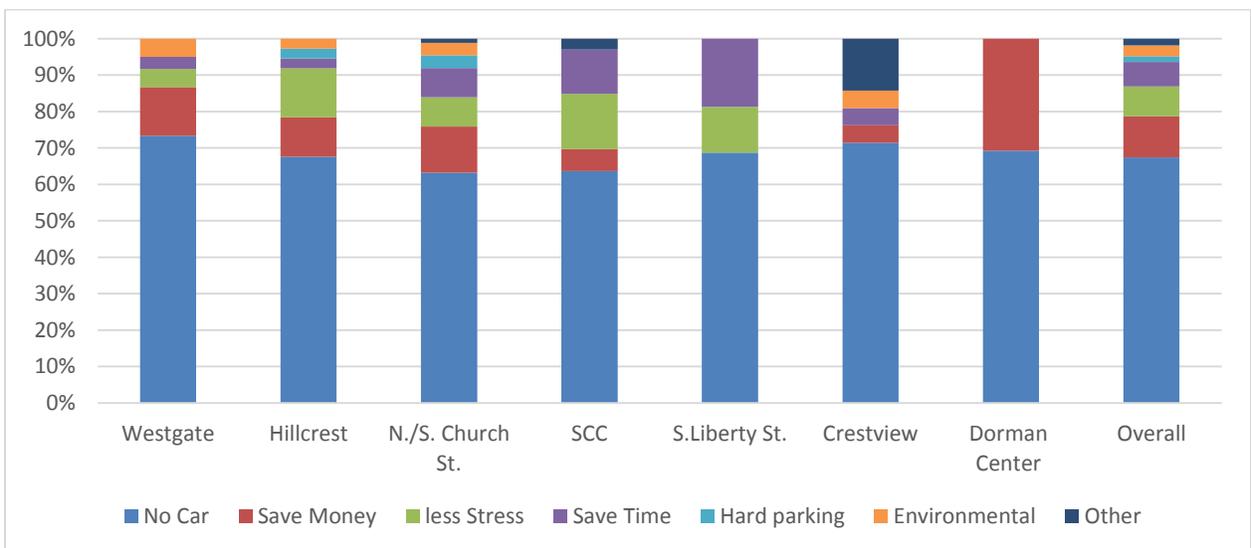
Figure 6-5 Trip Purpose by Line



Reasons for Riding

On all eight lines survey respondents had one dominant reason for riding SPARTA: no access to a personal vehicle. Almost 70% of respondents were riding the due to this reason. Some riders, particularly on the Dorman Centre line, ride because the bus is economical. Some respondents ride because the bus is less stressful, or to save time.

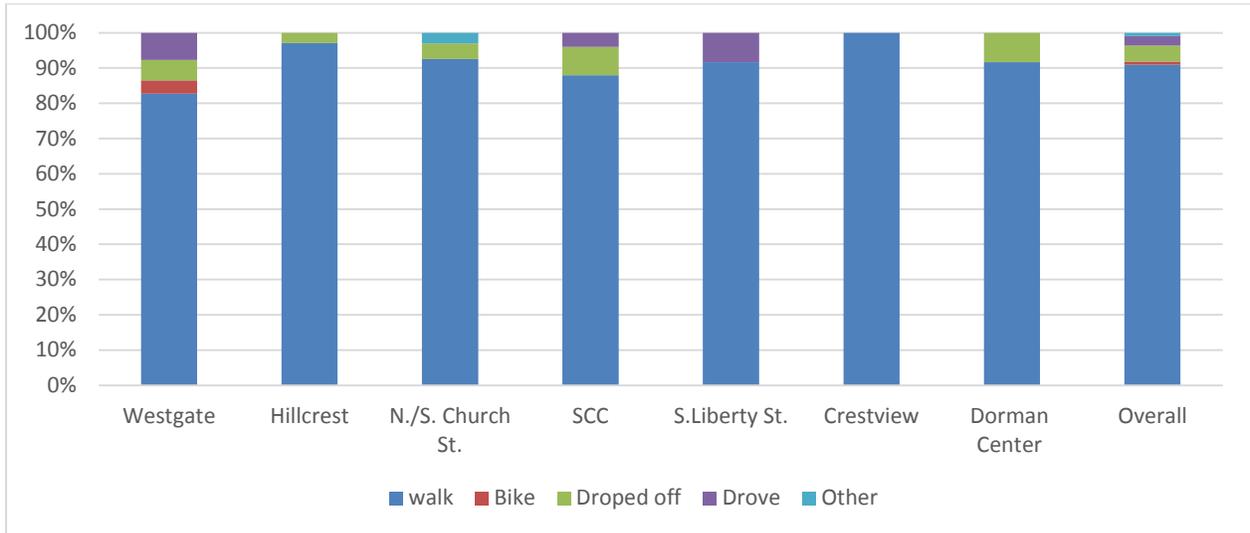
Figure 6-6 Reason for Riding the Bus



Travel Mode to the Bus Stop

The overwhelming number of respondents walked to the stop. This response is consistent across all eight lines. Few passengers drove to the stops and few were dropped off at them.

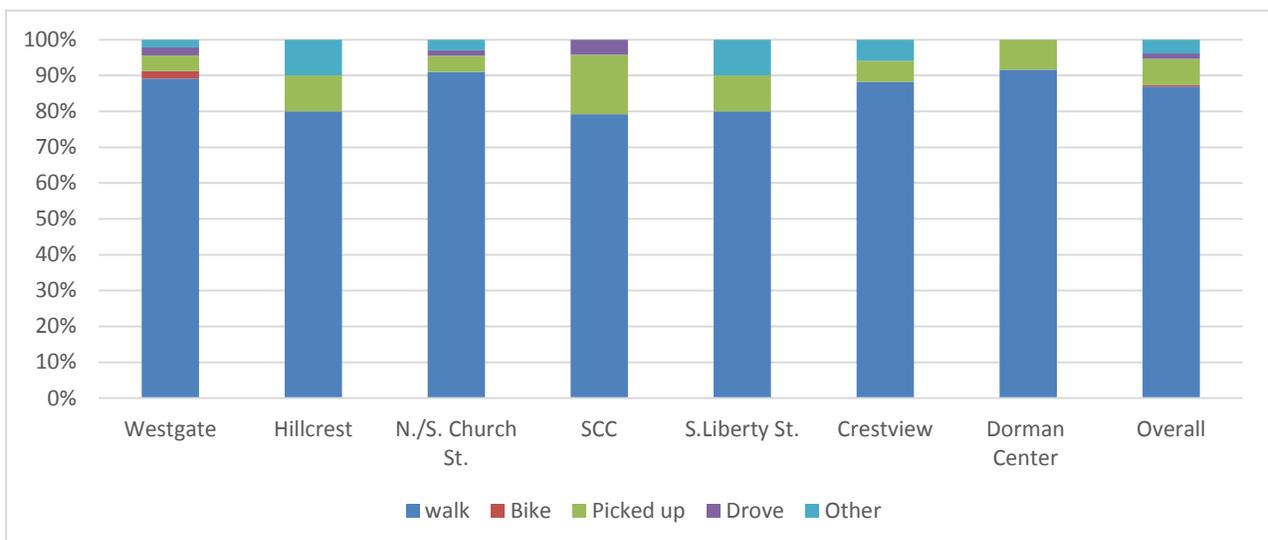
Figure 6-7 Mode Taken to Get to the Bus Stop



Mode Taken from Bus Stop to Destination

Respondents also overwhelmingly reported they walked from the stop to their destination. However, some passengers were picked up by someone at their destination.

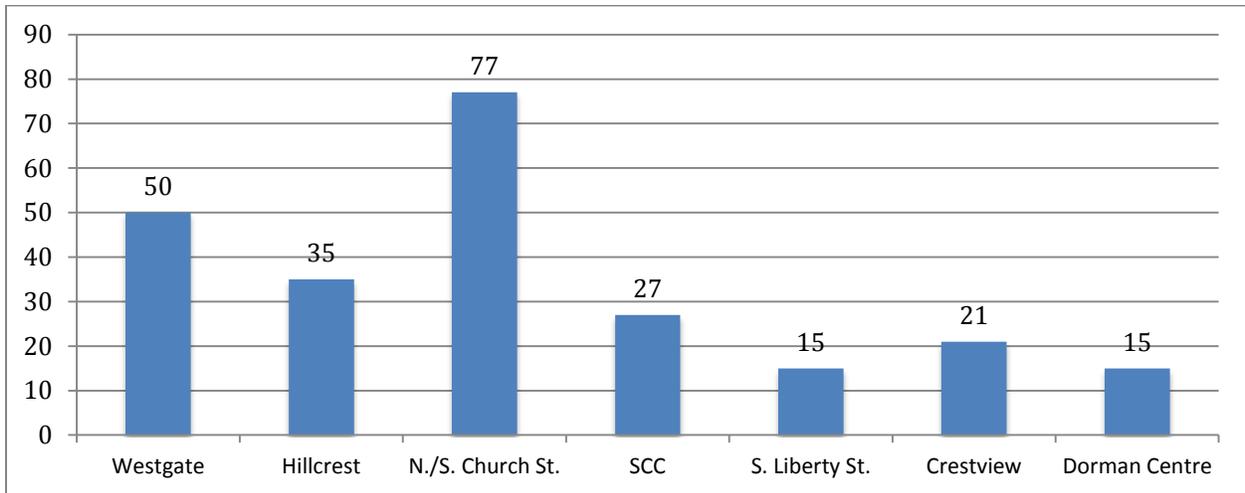
Figure 6-8 Mode Taken from Bus Stop to Reach Destination



To sum up, the survey's respondents, and presumably SPARTA's customer base, were comprised of riders who take bus 3-4 days a week or more. African Americans and women account for the lion's share of respondents. A lack of auto access overwhelmingly explains ridership. Most of the bus riders walked to and from the bus stops.

The distribution of responses by line was:

Figure 6-9 Distribution of Responses by Line



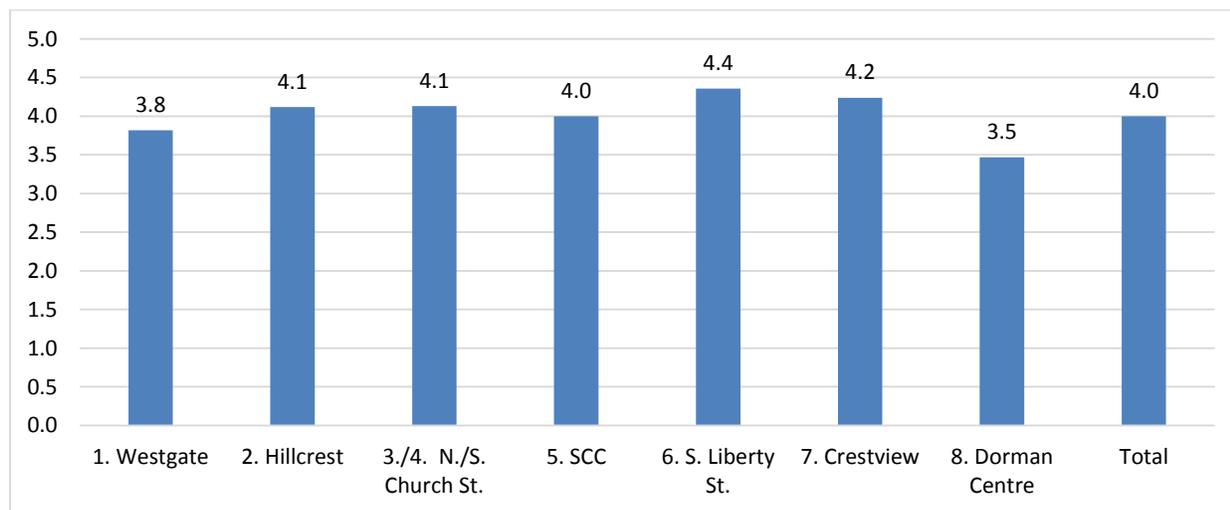
Chapter 7 Bus Riding Satisfaction

The first part of the survey was related to satisfaction with the bus ride itself. This was comprised of 10 questions.

Bus Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
My bus runs at convenient hours/days.	[]	[]	[]	[]	[]	[]
My bus stops at convenient places.	[]	[]	[]	[]	[]	[]
My bus arrives on time.	[]	[]	[]	[]	[]	[]
I feel safe on my bus.	[]	[]	[]	[]	[]	[]
My bus is clean.	[]	[]	[]	[]	[]	[]
My bus driver is friendly.	[]	[]	[]	[]	[]	[]
My bus driver is a safe driver.	[]	[]	[]	[]	[]	[]
It is easy to get on and off my bus.	[]	[]	[]	[]	[]	[]
My bus always has seats available.	[]	[]	[]	[]	[]	[]
Overall, I am satisfied with SPARTA buses and drivers	[]	[]	[]	[]	[]	[]

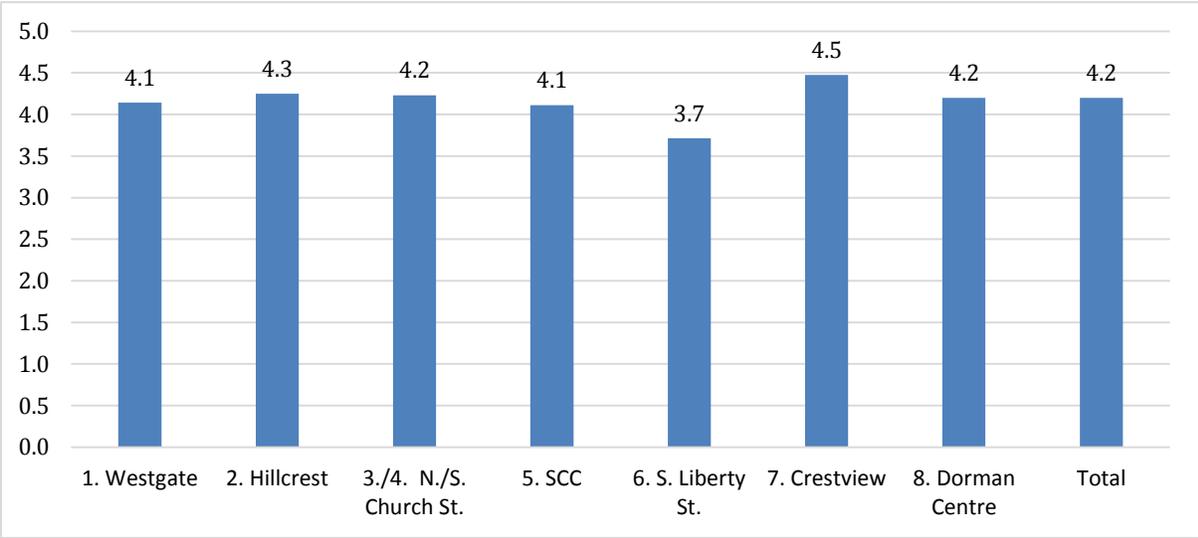
For the statement “My bus runs at convenient hours/days,” riders were, on an average, reasonably satisfied. However, satisfaction with this attribute was lower than for some other questions. In particular, there was some dissatisfaction with the schedule for the Dorman Centre line.

Figure 7-1 Satisfaction with Bus Operational Hours



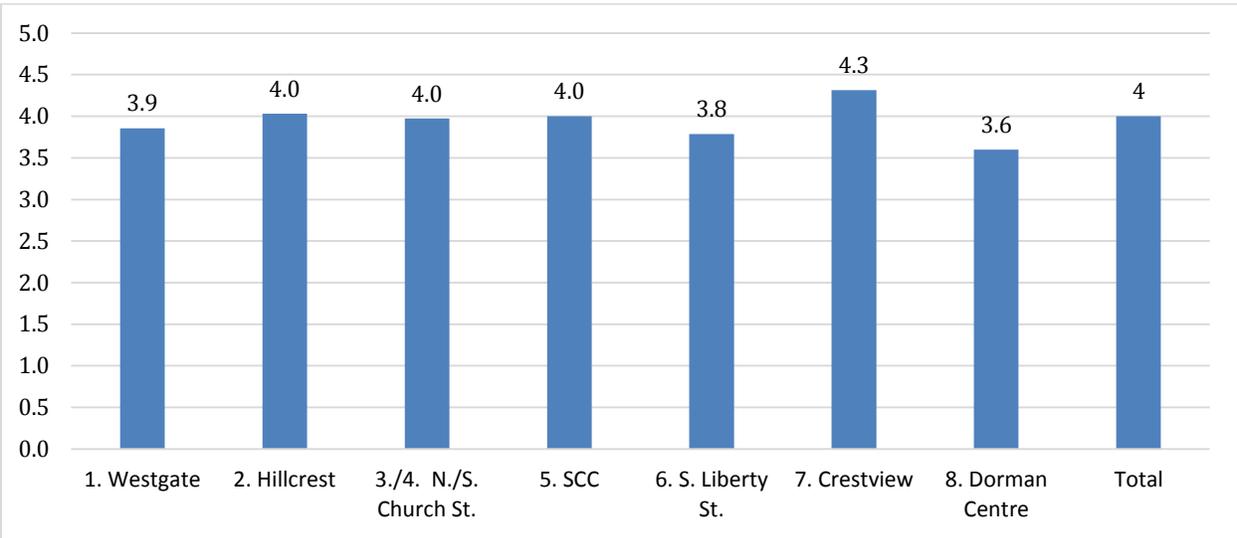
For the statement “My bus stops at convenient places,” riders were, on average, quite satisfied. Satisfaction was highest with the Crestview route, with the S. Liberty St. route having the lowest aggregate score.

Figure 7-2 Satisfaction with Bus Stop Locations



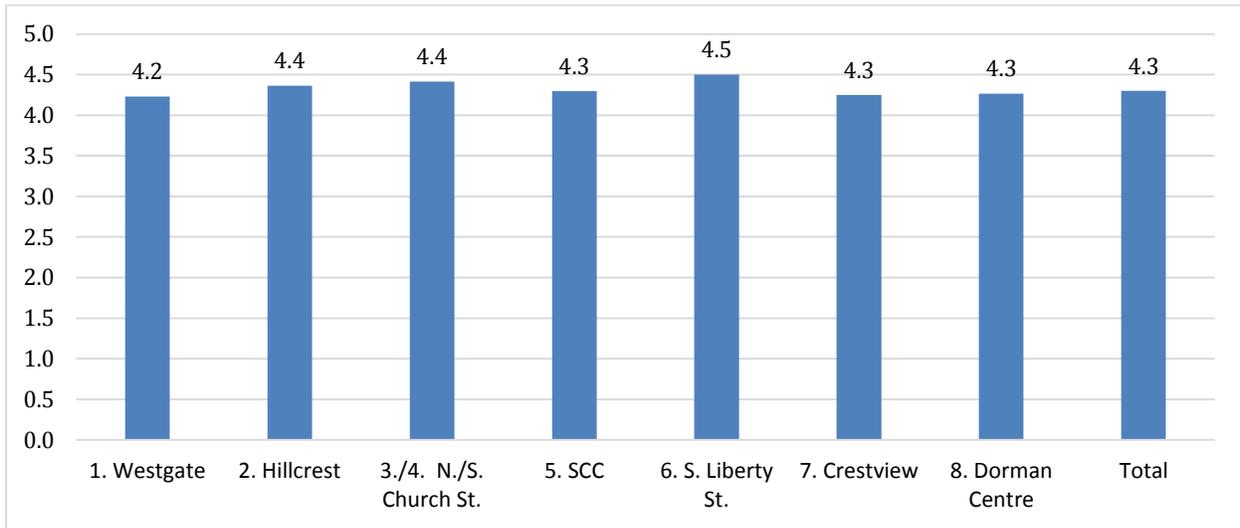
For the statement “My bus arrives on time” riders were, on average, reasonably but not overwhelmingly satisfied. The Crestview route had the highest satisfaction and the Dorman Centre and S. Liberty St. lines the lowest. SPARTA may wish to investigate operations on these two routes.

Figure 7-3 Satisfaction with Bus Punctuality



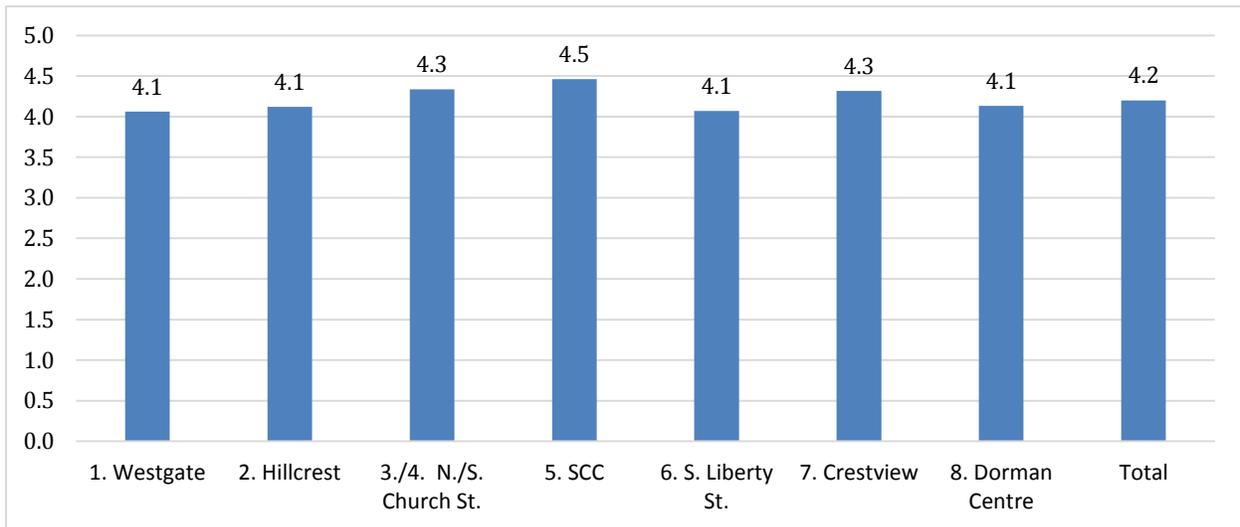
Riders feel very safe on SPARTA buses, with all routes scoring over 4.0.

Figure 7-4 Satisfaction with Safety on Bus



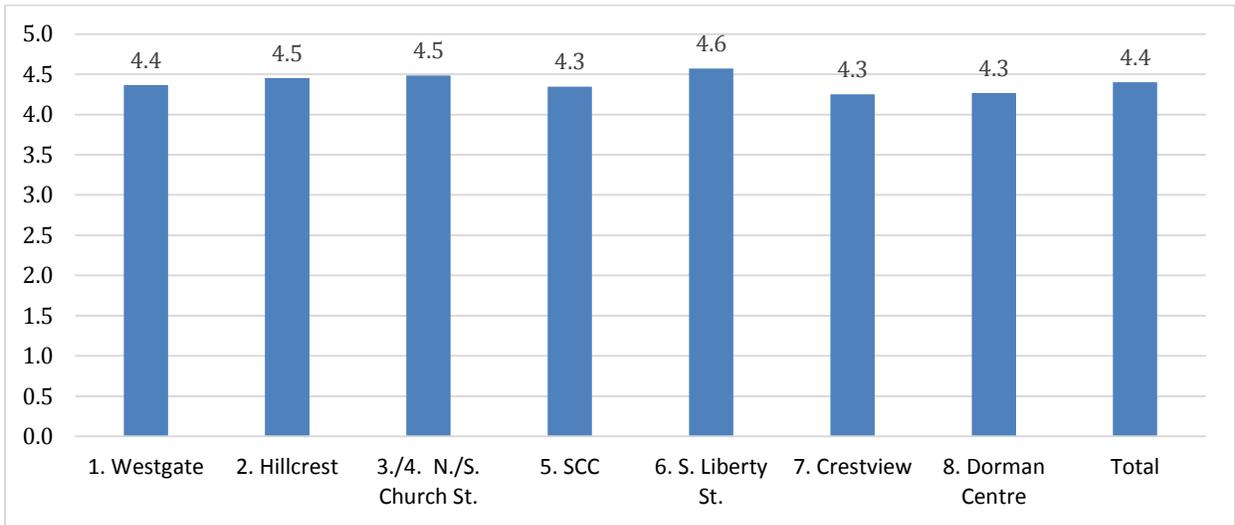
Riders registered strong agreement with the statement “My bus is clean,” with an average score of nearly 4.3.

Figure 7-5 Satisfaction with Bus Cleanliness



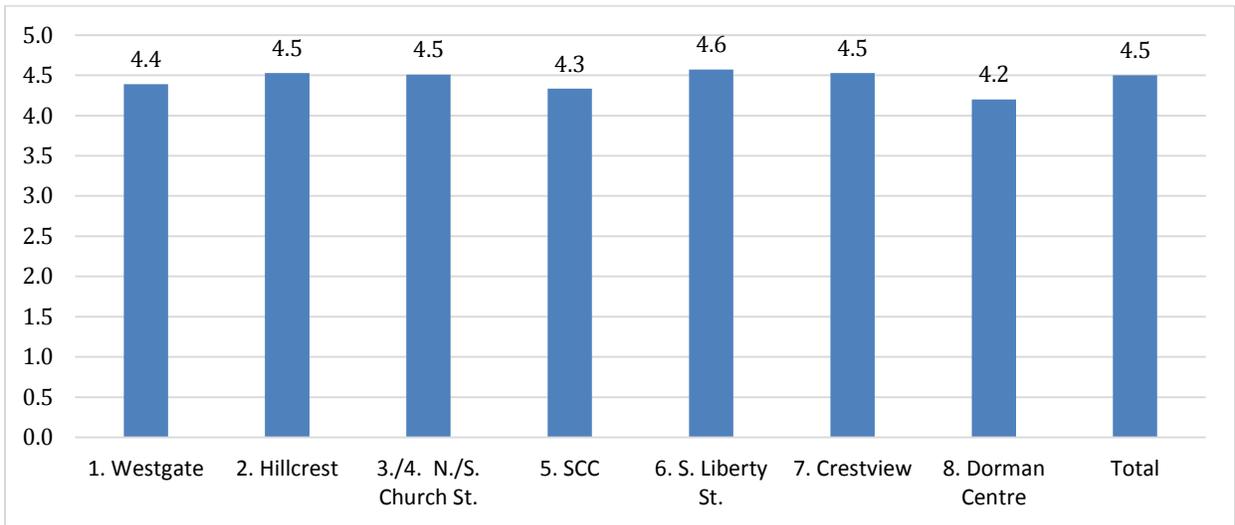
Riders are extremely satisfied with their bus drivers. For the statement “My bus driver is friendly,” riders reported an aggregate score of nearly 4.5. Riders on all lines gave the drivers high rankings. It should be noted that survey-taking personnel personally witnessed a very strong rapport between drivers and customers. This satisfaction holds across lines.

Figure 7-6 Satisfaction with Bus Driver Friendliness



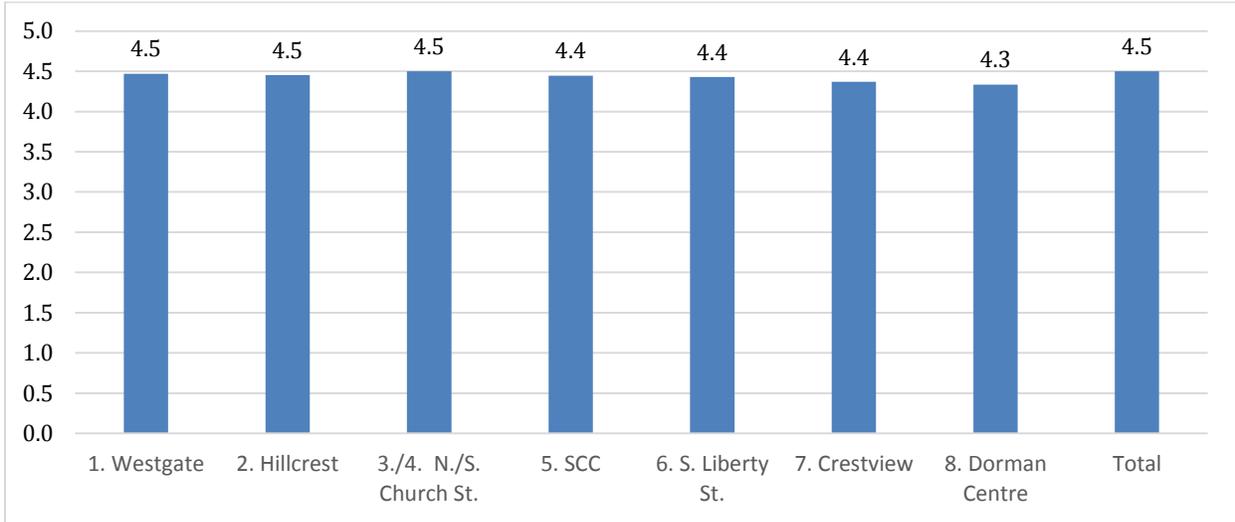
In addition to considering them friendly, riders find the operators to be safe drivers, with an average score of 4.5 for the statement “My bus driver is a safe driver.”

Figure 7-7 Satisfaction with Bus Driver Skill



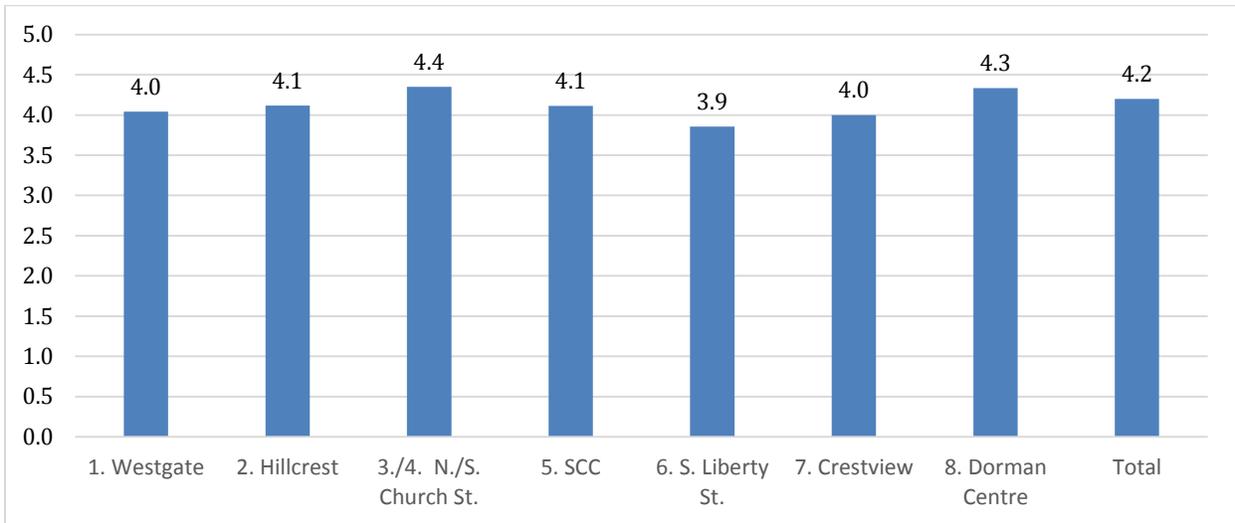
Riders reported very strong agreement with the statement “It is easy to get on and off the bus.”

Figure 7-8 Satisfaction with Ease of Boarding and Alighting



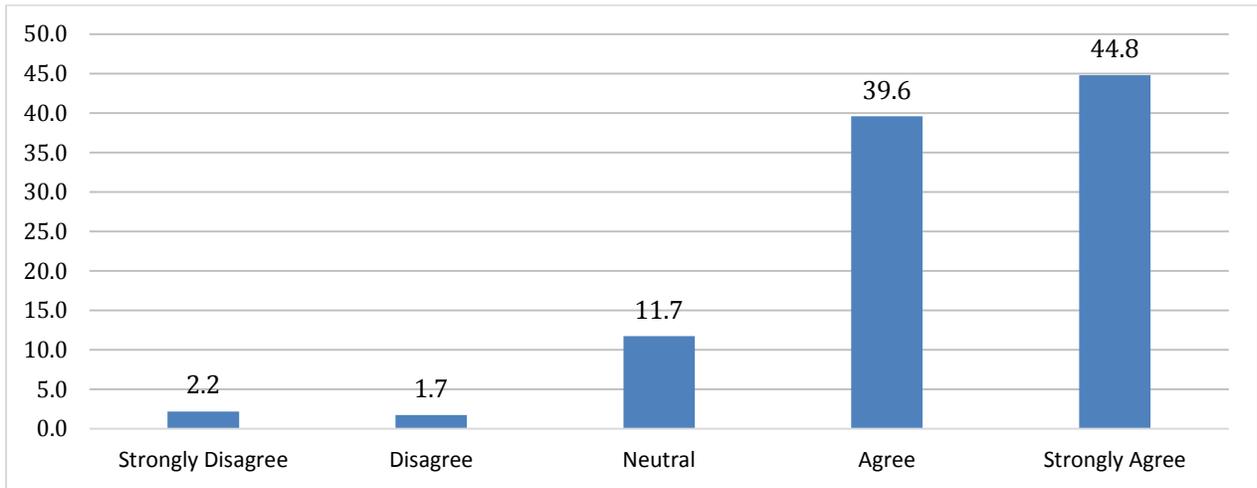
Riders are largely satisfied with the availability of seats on SPATA Buses, though satisfaction is slightly lower on the S. Liberty St. line, while being highest on the Church and Dorman Centre lines.

Figure 7-9 Satisfaction with Seat Availability



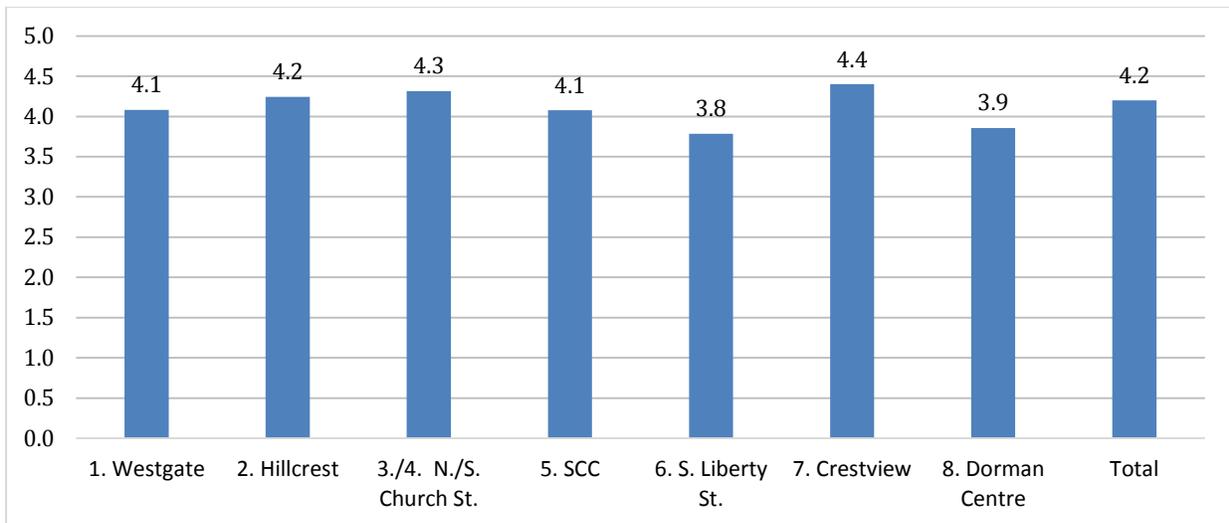
Overall, according to the results of the survey, SPARTA riders are satisfied with the service offered. Eighty-five percent riders agreed or strongly agreed with statement indicating overall satisfaction with SPARTA buses and drivers.

Figure 7-10 Overall Satisfaction with Buses and Drivers



Below is the average satisfaction reported by line.

Figure 7-11 Overall Bus Satisfaction



It should be noted that there is slightly lower satisfaction for the Liberty and Dorman Centre lines. The Crestview Line performs best, but overall the difference in lines is not great.

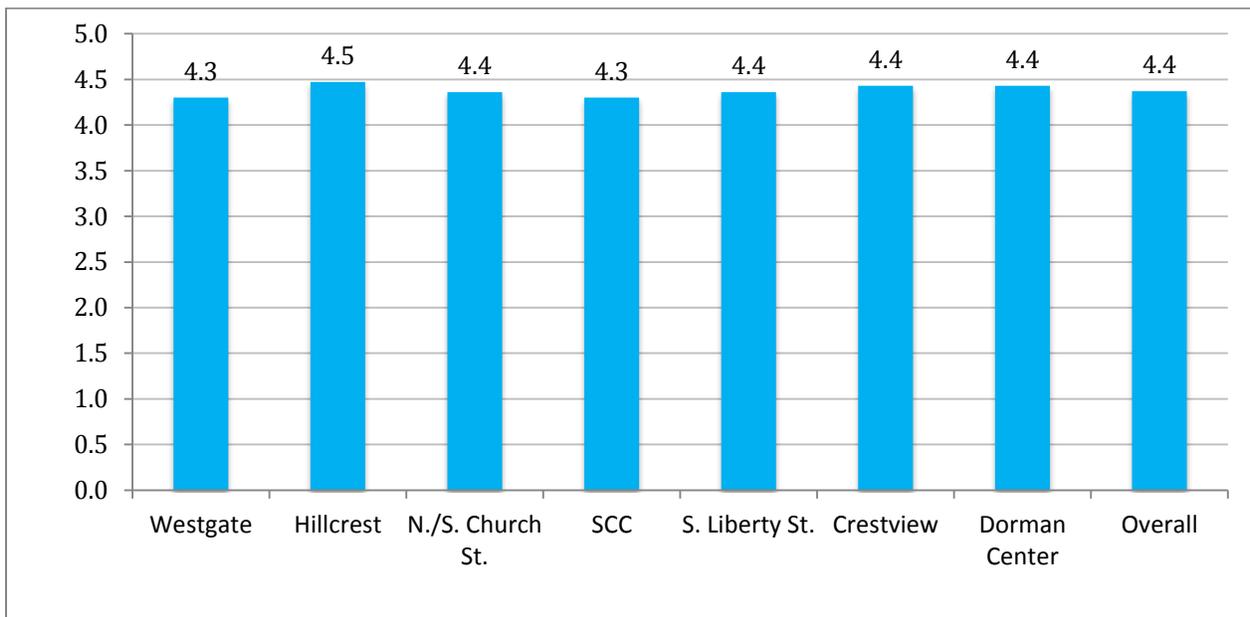
Chapter 8 Bus Fare Satisfaction

Two questions on the survey referred to bus fares. Participants were asked if the bus fare was worth their money and if it was easy to pay the fare. They were asked to respond on the scale from Strongly Agree to Strongly Disagree.

Bus Fare Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
My bus fare is worth the money.	[]	[]	[]	[]	[]	[]
It is easy to pay my fare.	[]	[]	[]	[]	[]	[]

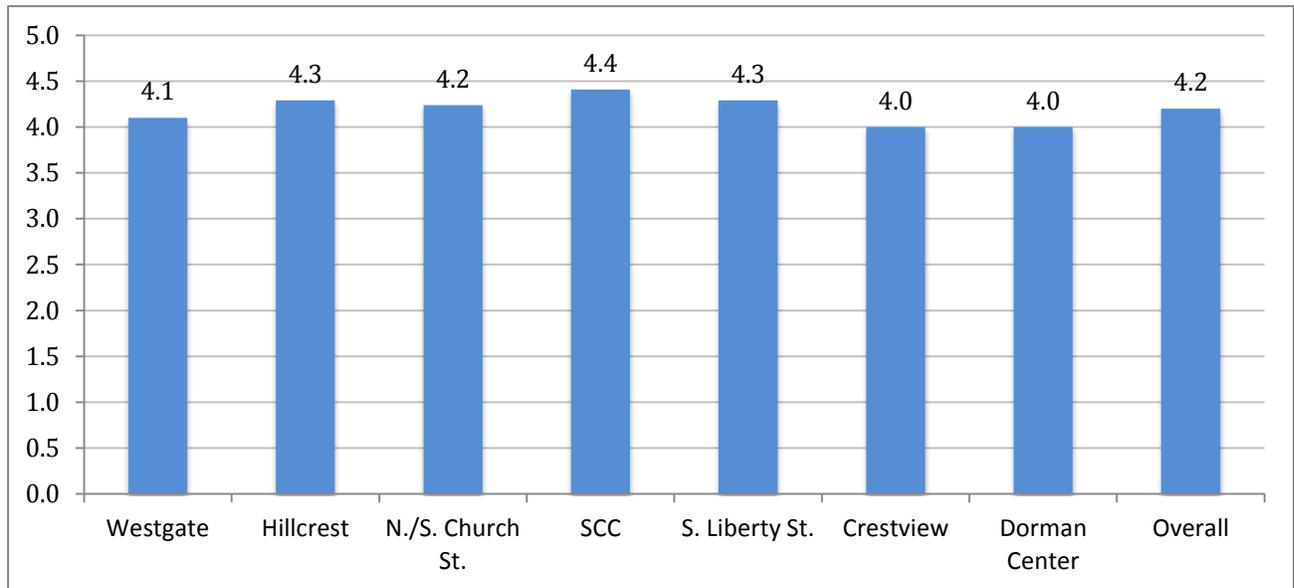
SPARTA riders are in agreement that the bus service is worth the money they pay. There is little variation on this question between lines. About 90% of SPARTA riders agree or strongly agree that their bus fare is worth the money.

Figure 8-1 Service is Worth the Money



Over 85% of SPARTA riders agree or strongly agree that it is easy to pay the bus fare. Satisfaction is high across the board, and riders across lines tend to be in agreement on this. Overall, SPARTA riders seem very satisfied with the cost and ease of payment of bus fares.

Figure 8-2 Satisfaction with Ease of Fare Payment

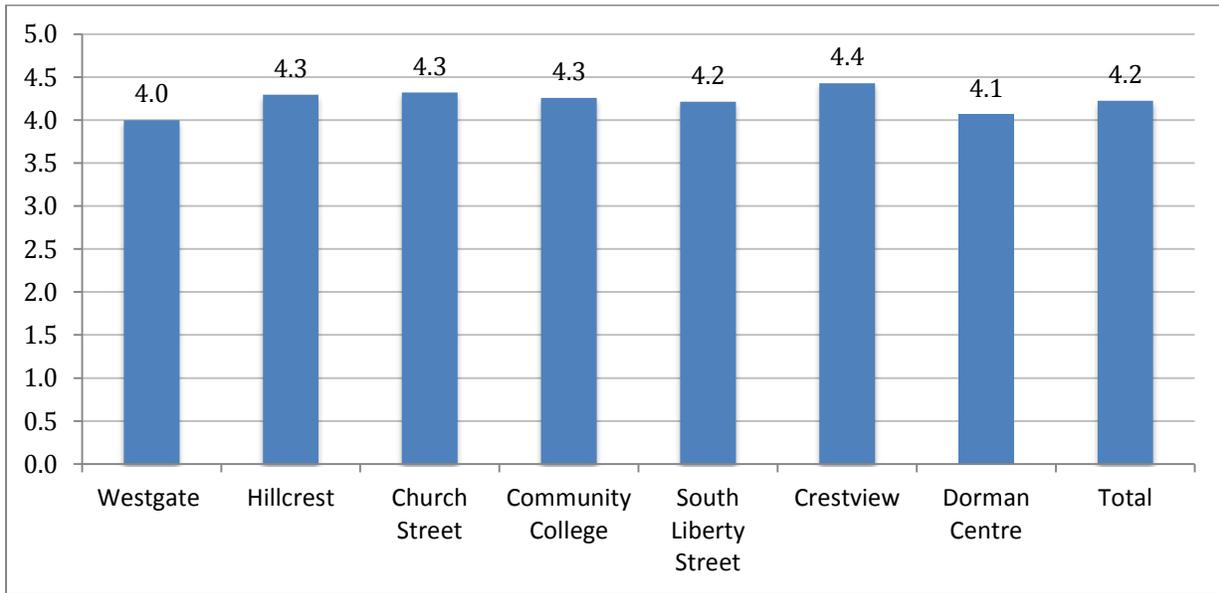


Chapter 9 Bus Stop Satisfaction

The survey included three questions about aspects of bus stops, and a question about overall satisfaction with bus stops in general.

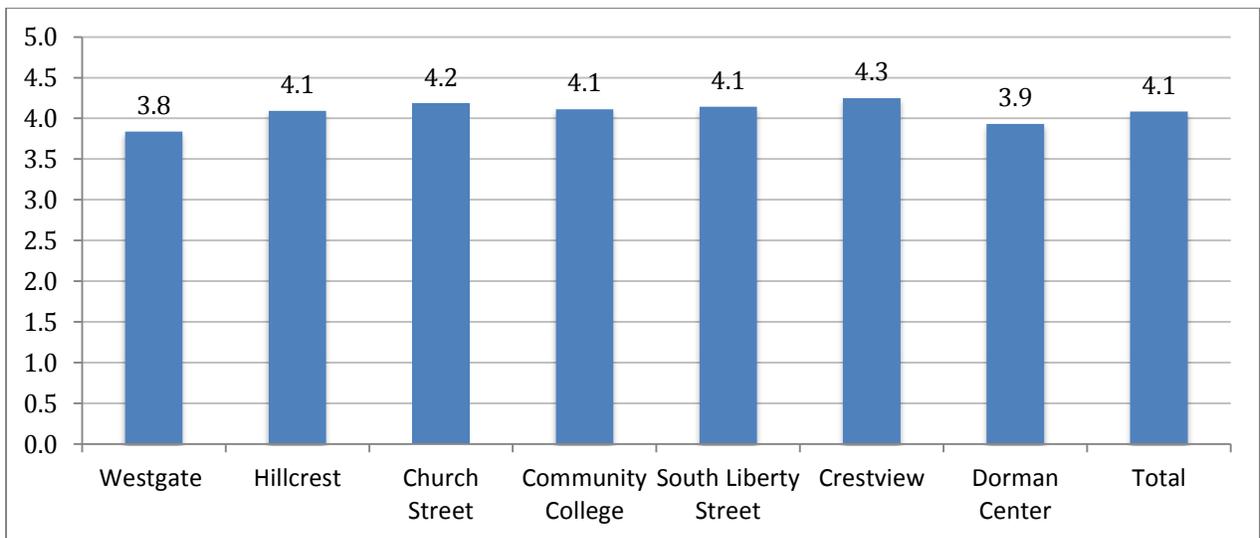
The first question was about perceived safety at bus stops. Overall, riders feel very safe at SPARTA stops. There was little difference across lines, with all lines scoring a 4.0 or better. The Crestview and Hillcrest lines scored highest.

Figure 9-1 Satisfaction with Safety at Bus Stops



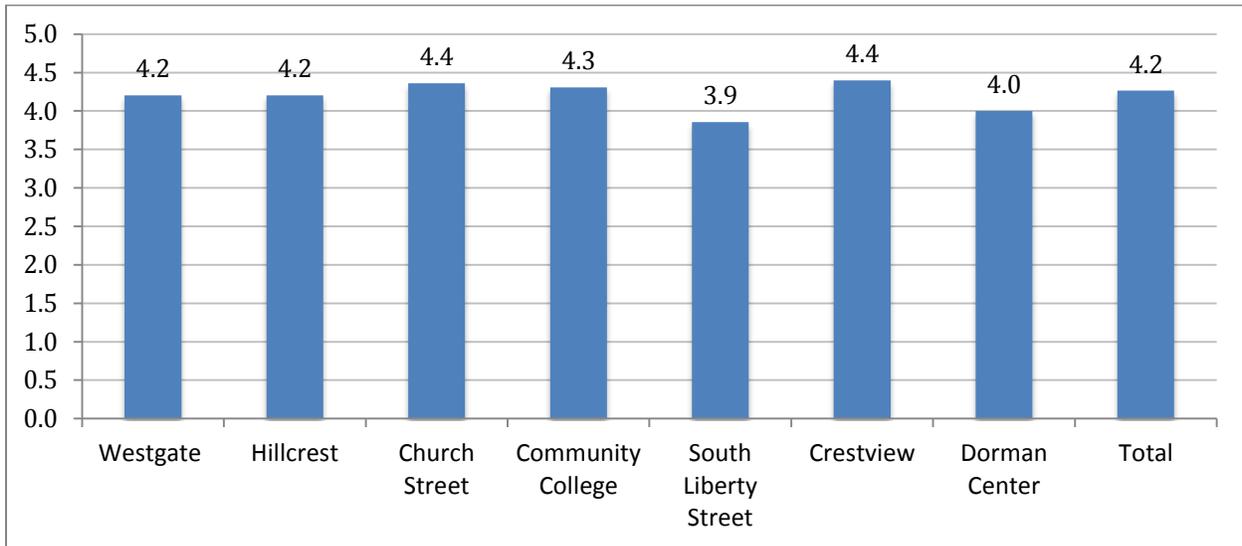
Riders were most satisfied with the cleanliness of bus stops along the Crestview and Church St. lines and least satisfied along the Westgate line. Overall, system-wide satisfaction with the cleanliness of stops was reasonably high.

Figure 9-2 Satisfaction with Cleanliness at Bus Stops



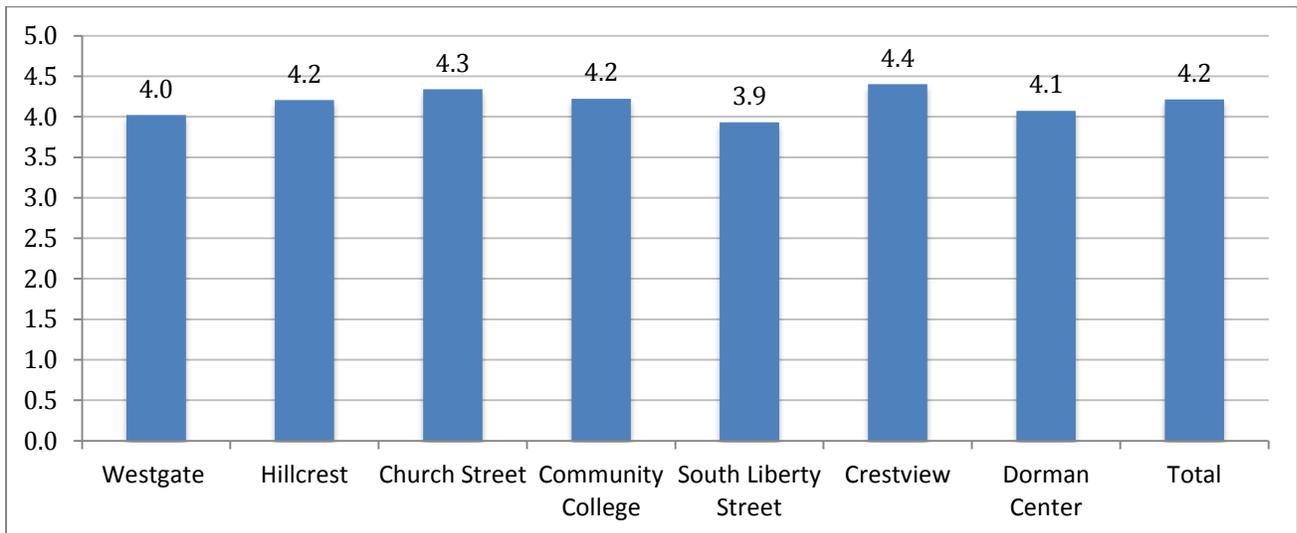
In general, riders were very satisfied with the ease of getting to their final destination from their bus stop. There were no dramatic differences between lines, although the Dorman Centre and S. Liberty St. lines showed slightly lower satisfaction rates.

Figure 9-3 Satisfaction with Ease of Reaching Destinations



In all, satisfaction with SPARTA bus stops is high. Eighty-one percent of riders report being very satisfied or satisfied with their bus stops. Eighty-five percent of riders believe that their stops are safe, 76% of riders believe that their stops are clean, and 86% of riders think that it is easy to get to their destination from their bus stops. The lines with the most satisfied riders are Church St. and Crestview. The lines with riders least satisfied with their bus stops are Westgate and S. Liberty St., but these scores are not very low.

Figure 9-4 Overall Bus Stop Satisfaction

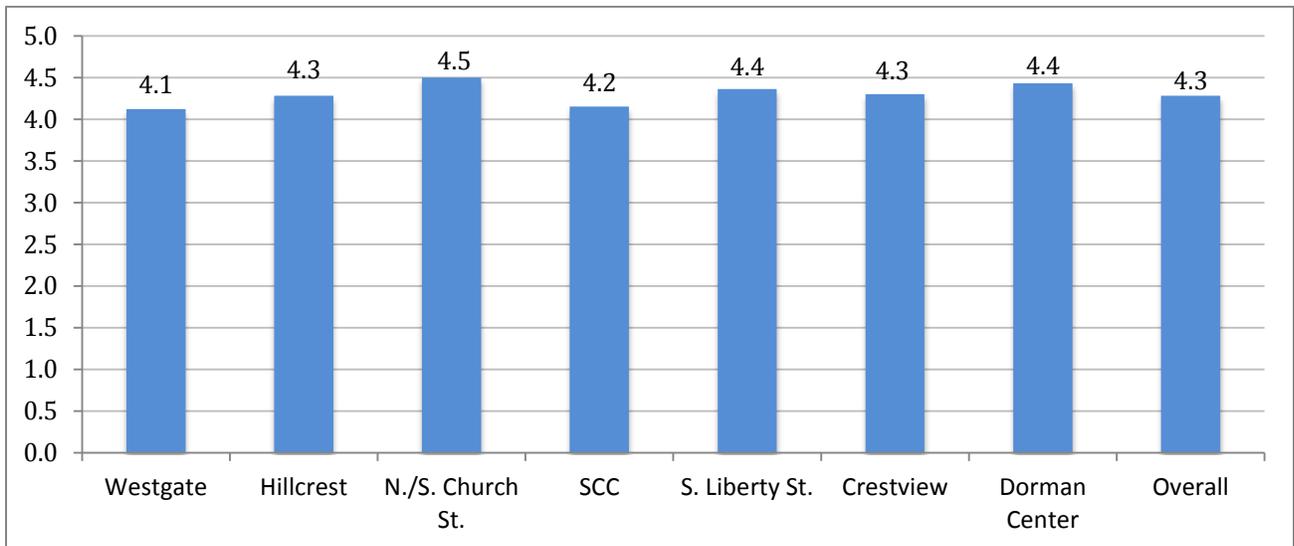


Chapter 10 Transit Center/ Website Satisfaction

Four questions were asked in relation to the transit center, also referred to as the passenger center. Questions were asked about the friendliness and helpfulness of staff, the availability of information, the reliability of connections, and overall satisfaction with the transit center. Participants were also asked about the effectiveness of the SPARTA website. Again, scores were on a scale from Strongly Agree to Strongly Disagree.

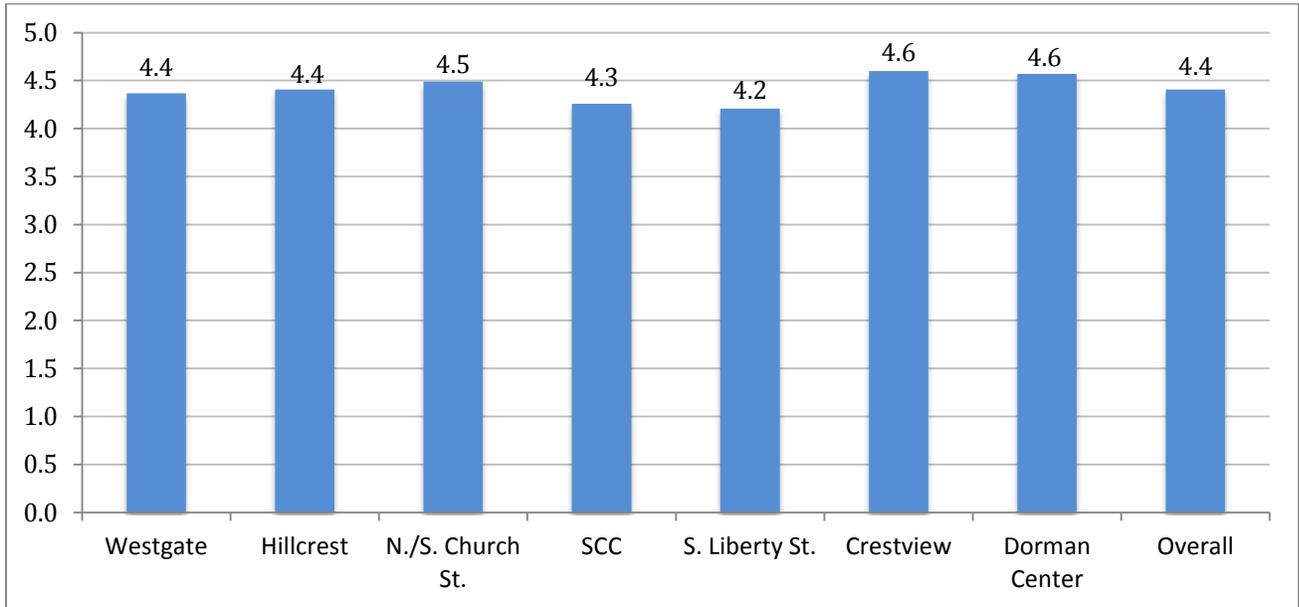
A large majority of riders either agree or strongly agree that the SPARTA transit center staff is friendly and helpful. Respondents on the Church St. and Dorman Centre lines were most likely to agree. All groups average over a 4 on the 5 point scale.

Figure 10-1 Satisfaction with Transit Center Staff Friendliness



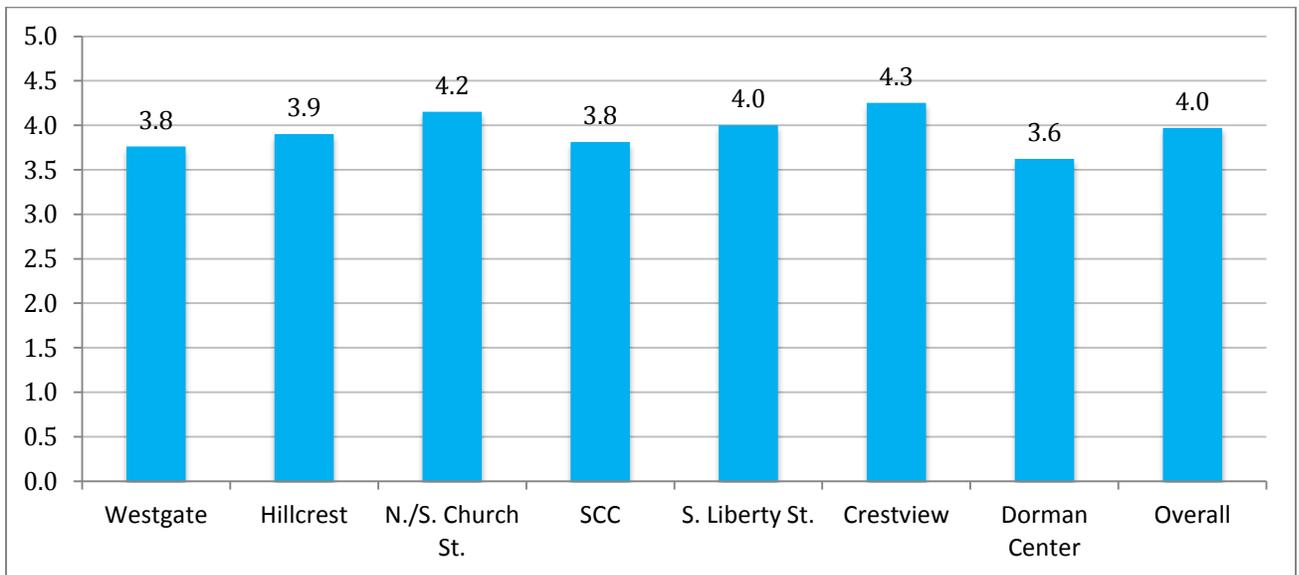
Riders on all lines were in overall agreement that information at the transit center is adequate.

Figure 10-2 Satisfaction with Availability of Information at Transit Center



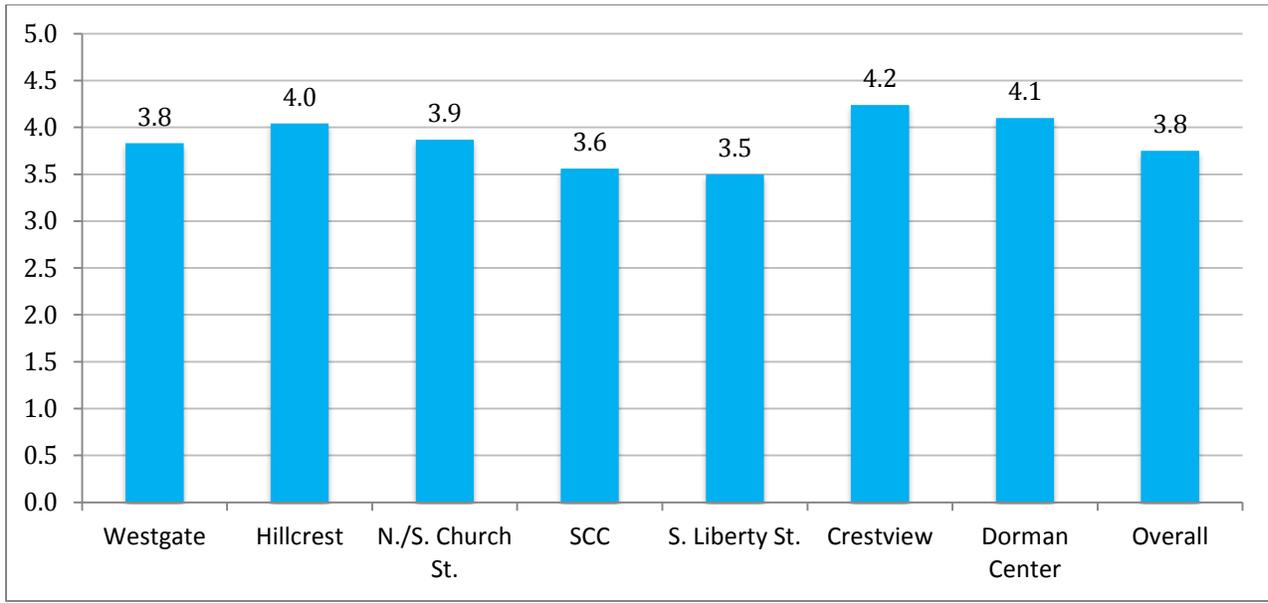
Compared to other aspects of service, riders were somewhat more dissatisfied with the reliability of connections. Riders on some lines reported mean satisfaction scores under 4.0. Over 10% of all respondents disagreed or strongly disagreed with the statement that connections are reliable. Dissatisfaction was highest for Dorman Centre. Still, on the whole attitudes were reasonably positive.

Figure 10-3 Satisfaction with Transit Center Reliability



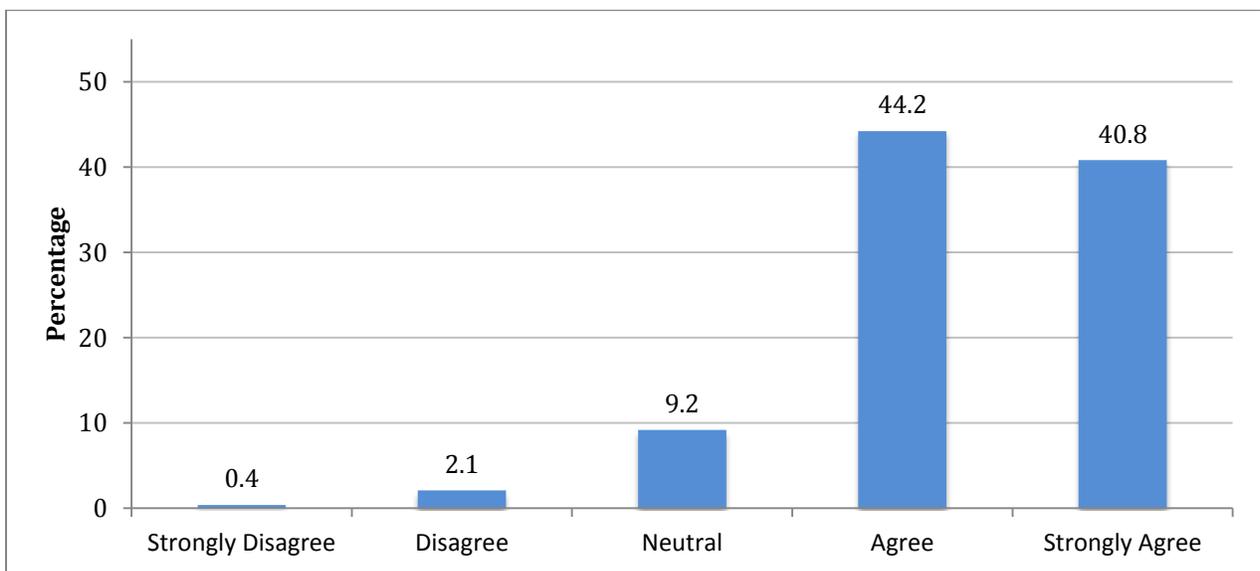
As with transfers, satisfaction with SPARTA’s website is reasonably high but suggests some room for improvement. Riders on some lines reported mean scores under 4.0. The majority of SPARTA riders did agree that the SPARTA website is easy to use and has all of the information they need, but almost 20% were neutral on the issue and the overall score was under 4.0.

Figure 10-4 Satisfaction with Usefulness of Sparta Website



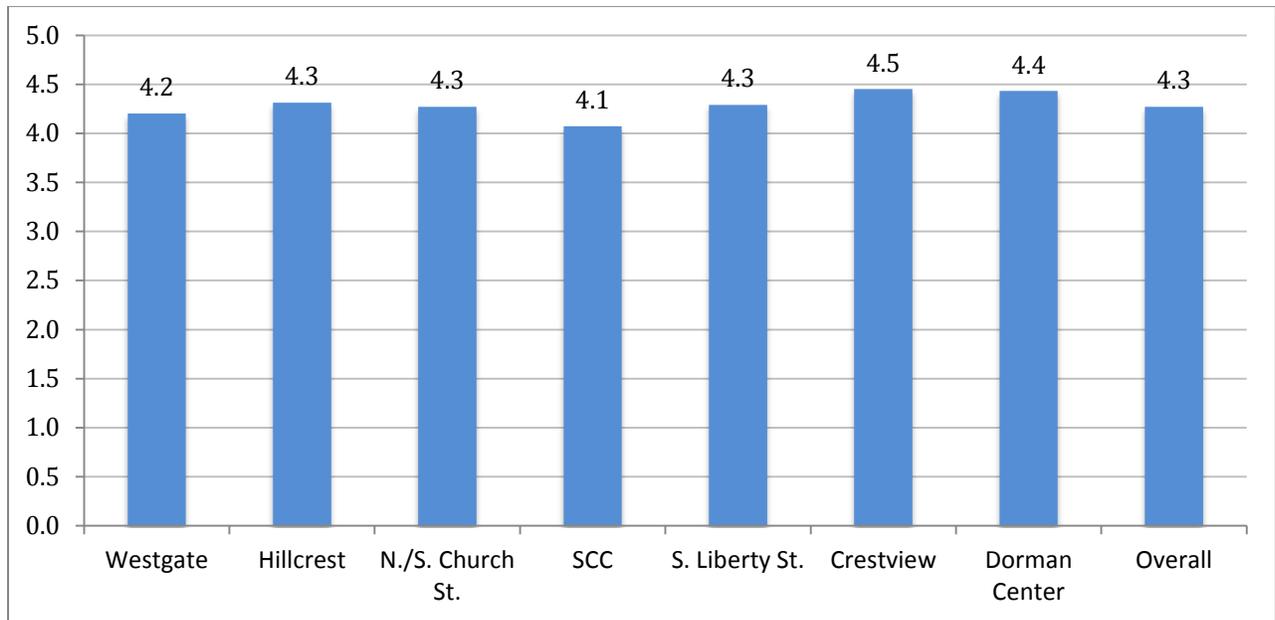
Overall, riders tended to express satisfaction with the transit center as a whole. The majority of riders agree or strongly agree that they are satisfied.

Figure 10-5 Overall Transit Center Satisfaction



All lines had mean scores greater than 4.0.

Figure 10-6 Overall Transit Center Satisfaction by Line



Chapter 11 Overall Satisfaction Statistics

This section analyzes the scores for the question “Overall, I am satisfied with SPARTA staff and service, including every aspect of travel on SPARTA.” It looks at these numbers by line and across various demographic segments. It also displays results of an analysis of which service attributes are important to users, and how SPARTA is faring in providing these services.

Looking across the system, it can be seen that overall satisfaction is quite high.

Figure 11-1 Overall Satisfaction Score for All Lines

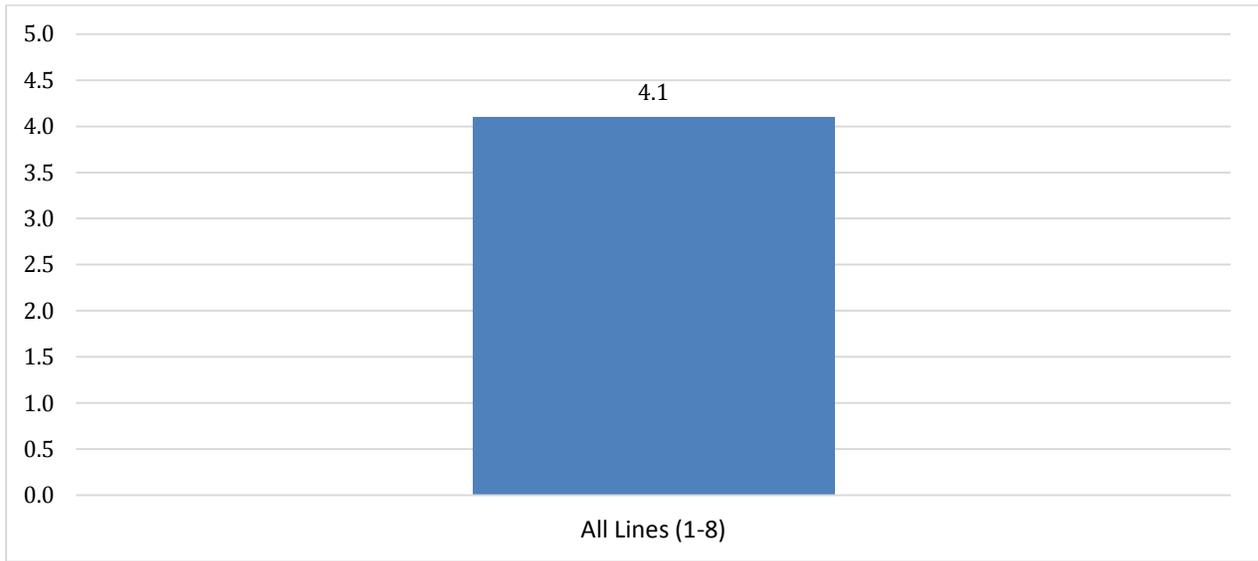


Figure 11.2 shows average satisfaction scores for male and female riders across all lines. Female riders are slightly more satisfied compared to the male riders, but the difference is not meaningful.

Figure 11-2 Average Satisfaction Scores for Males and Females Across All Lines

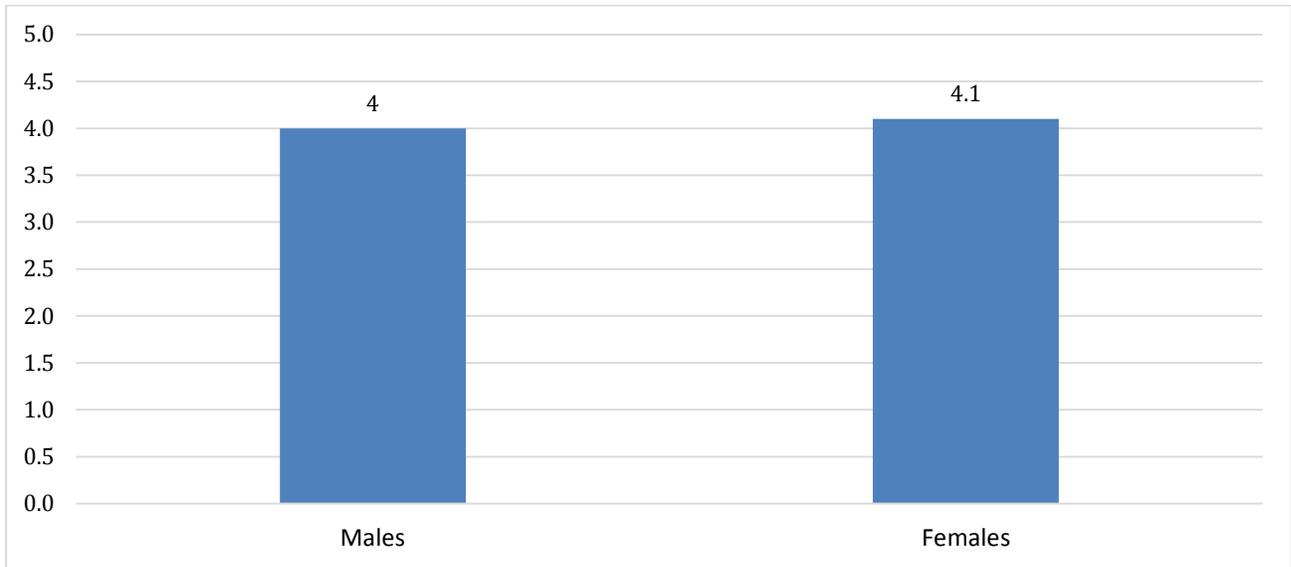
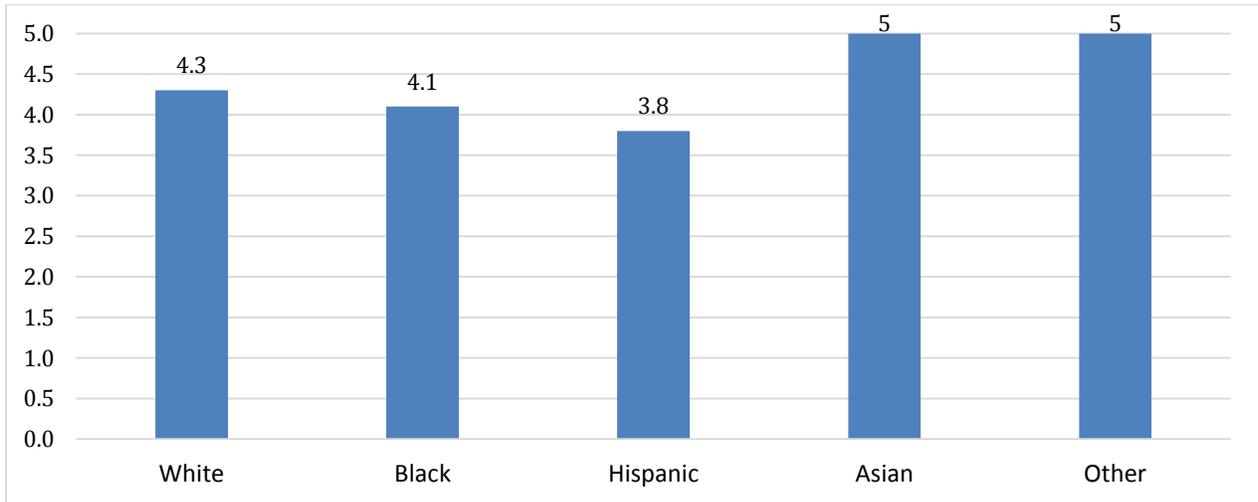


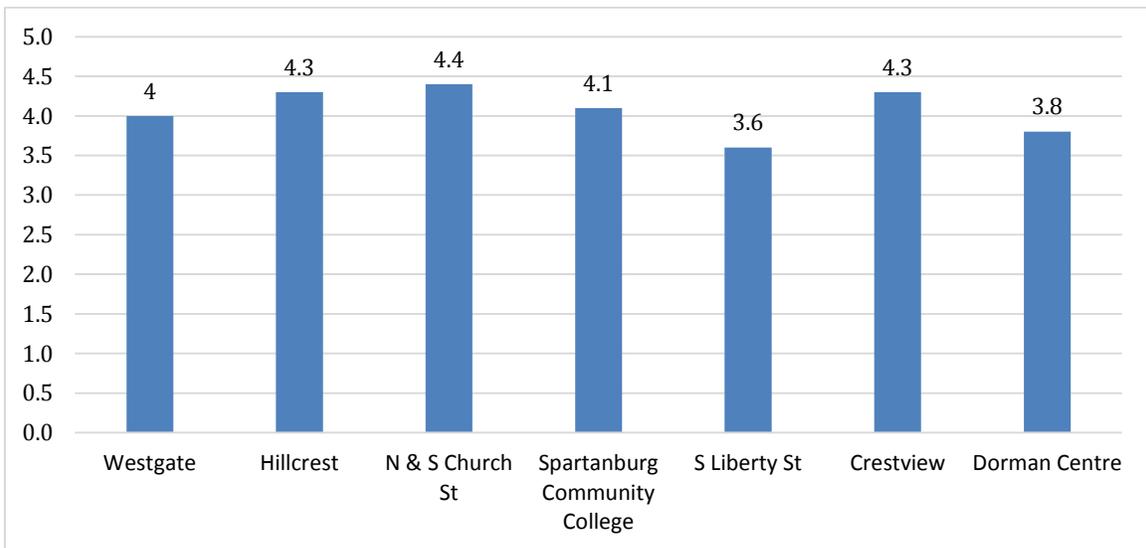
Figure 11.3 depicts the average satisfaction scores for different races and ethnicities for all lines. Although there were very few Hispanics among respondents, they were the least satisfied group. Asians and other races are most satisfied with the service, however, once again riders from these racial categories were very few in number. White riders are somewhat more satisfied than black riders.

Figure 11-3 Average Satisfaction Scores for All Races Across All Lines



Average satisfaction scores of riders for each line are presented in Figure 11.4. Riders taking the N. and S. Church St route were the most satisfied, followed closely by Hillcrest and Crestview. The least satisfied riders were on the Dorman Centre, and, particularly, S. Liberty lines, suggesting that future efforts to improve service there may be in order.

Figure 11-4 Average Satisfaction Scores for Each Line



Riders who ride more frequently are somewhat more satisfied than others, as is indicated in Figure 11-5.

Figure 11-5 Average Satisfaction Scores for Different Ride Frequencies Across all Lines

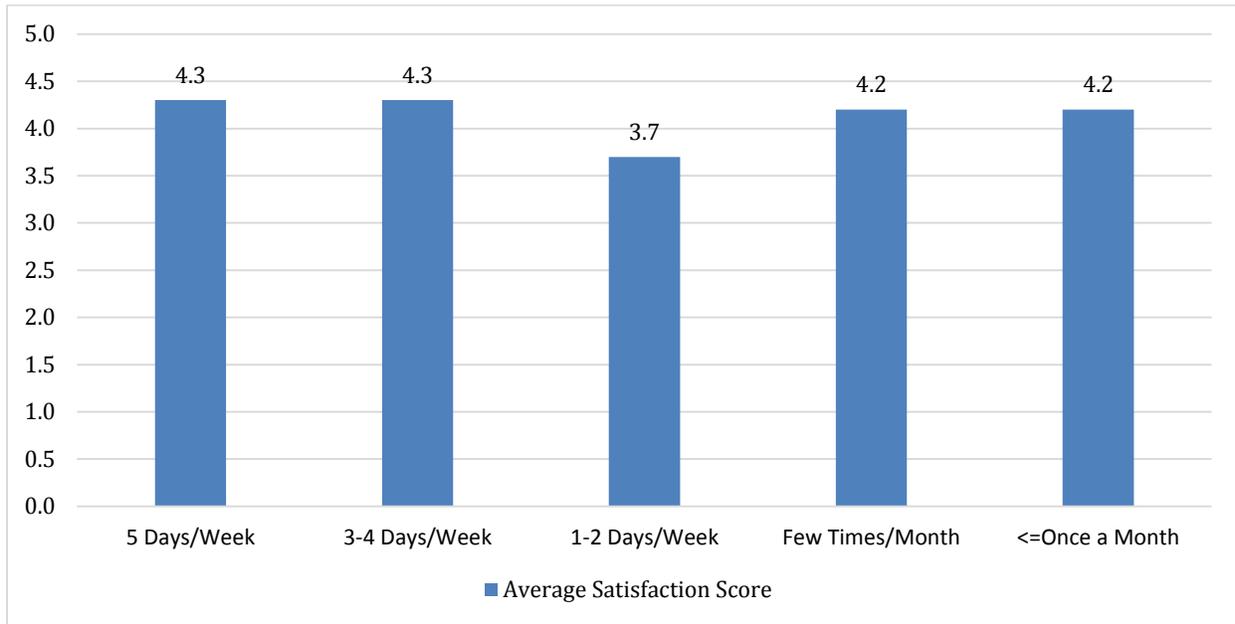


Figure 11.6 shows the average satisfaction scores among riders based on their reason(s) for using SPARTA. Most people gave “No car” as the reason for using the bus; they are reasonably satisfied with the service with an average score of more than 4. Riders who gave “Less stress” as the reason for using the bus were the least satisfied, although the average score for this category is quite satisfactory. It should be noted that those who use the bus by choice, for example to avoid parking problems or save money, are somewhat more satisfied than those who ride by necessity, though the differences are not large.

Figure 11-6 Average Satisfaction Scores for Different Riding Reasons Across All Lines

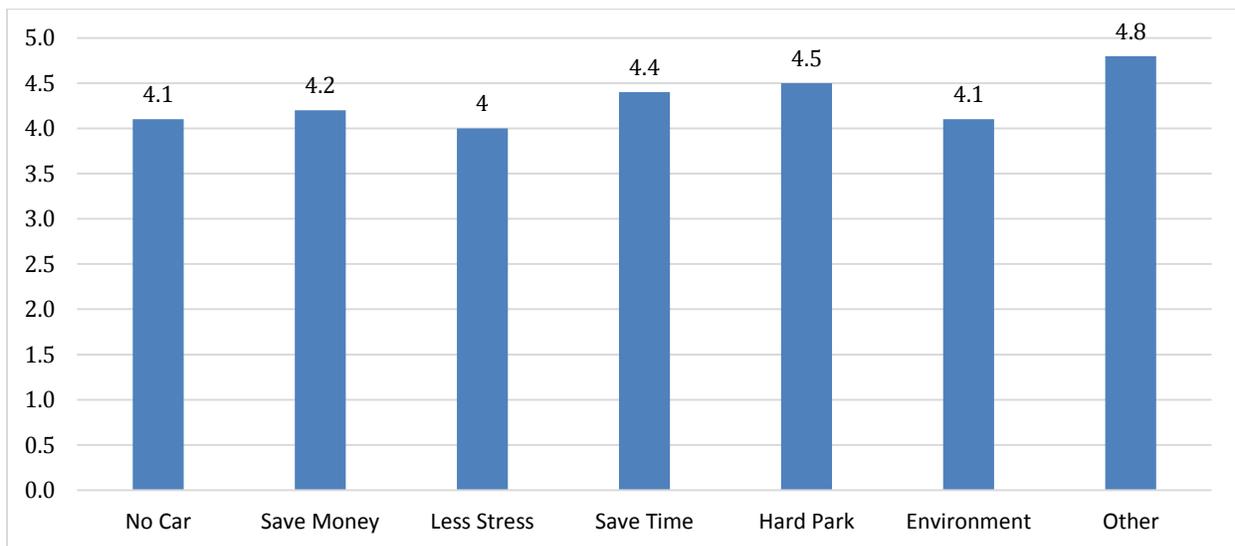
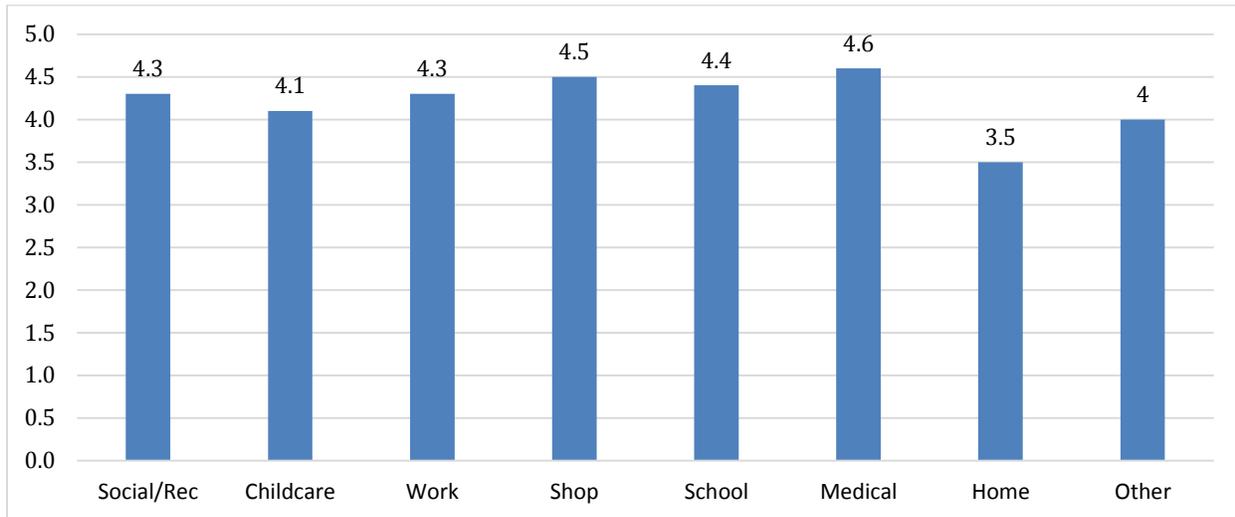


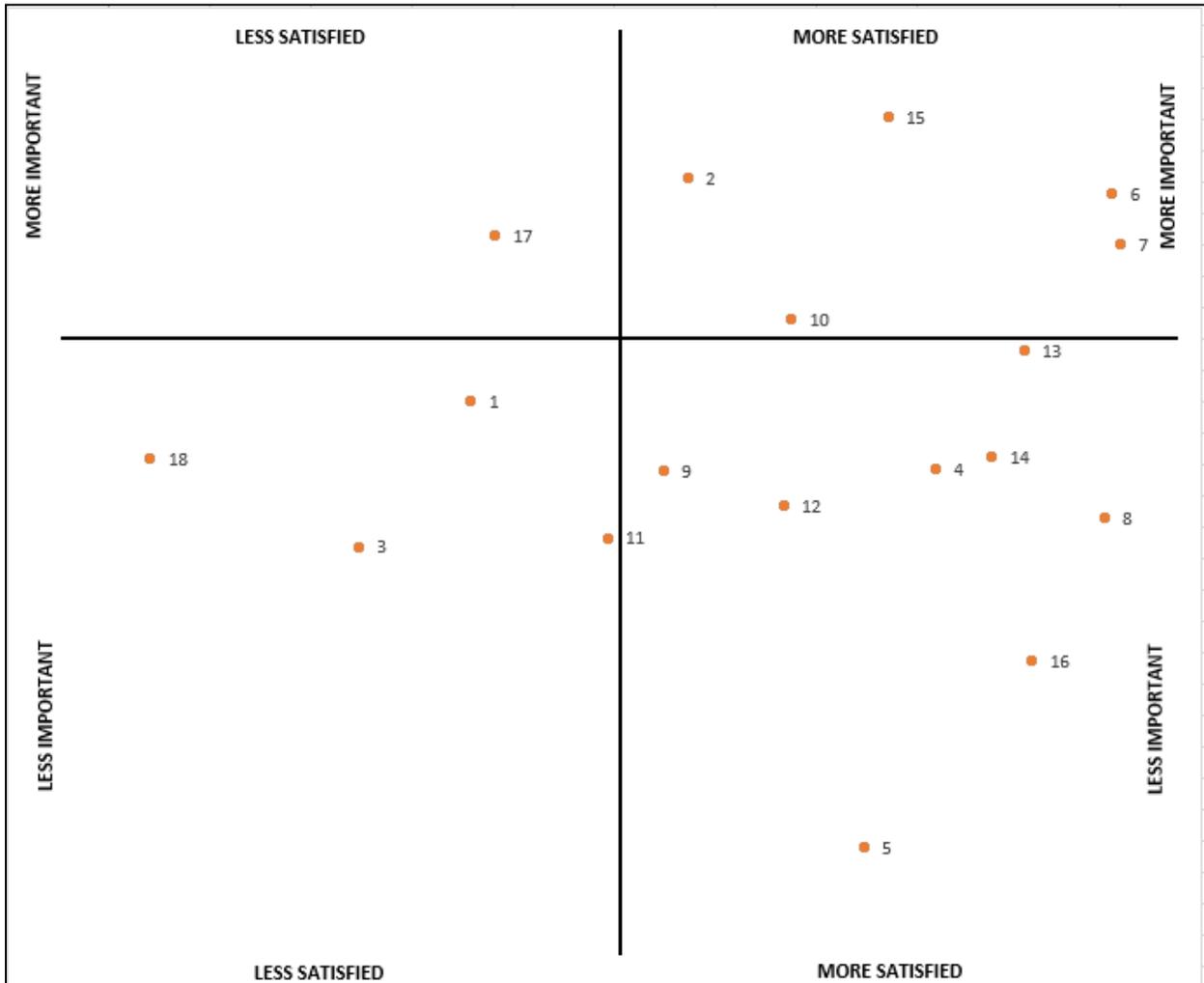
Figure 11.7 shows the average satisfaction scores among riders based on their trip purpose across all lines. In general, riders using SPARTA for shopping and medical purposes ranked the service higher than other trip purposes. Scores were reasonably similar, though.

Figure 11-7 Average Satisfaction Scores for Different Trip Purposes Across All Lines



Finally, the survey responses were used to create a chart indicating 1) how important 19 various service attributes are in shaping rider satisfaction, and 2) how well SPARTA is succeeding in furnishing those attributes. To determine importance, this study performed a multiple regression analysis to determine how closely riders' scores for each attribute corresponded to their overall satisfaction score. If an attribute score had little relationship with the overall score it was deemed to be unimportant, and vice versa. Results are:

Figure 11-8 Determinants of Rider Satisfaction



Key: 1- Convenient Hours and Days, 2- Convenient Places, 3- On Time, 4- Bus Safe, 5- Clean Bus, 6- Friendly Driver, 7- Safe Driver, 8- Easy on and off, 9- Seat Availability, 10- Safe Stop, 11- Clean Stop, 12- Easy Stop/Destination, 13- Fare Worth, 14- Easy Fare Pay, 15- Transit Center Staff Friendliness, 16- Transit Center Info, 17- Connection Reliability, 18- SPARTA Website

The vertical axis (Y-axis) shows the derived importance of the attributes and horizontal axis (X-axis) shows satisfaction with each attribute. The lines bisecting the chart indicate average satisfaction and importance. The top right quadrant shows important attributes SPARTA is succeeding in providing. These include driver friendliness, transit center staff friendliness, safe driving, safety at stops and convenient stop placement. The top left quadrant shows the only attribute the survey asked about that is above average in importance and below average in rider satisfaction: connection reliability. In addition, convenient hours and days of service is nearly in the more important and less satisfied quadrant. The bottom left shows that on-time performance, clean stops, and the website are also areas with some dissatisfaction, but these are areas of

relatively lower importance. Lower-importance attributes with which riders are satisfied include safety on the bus, clean buses, easy access and egress, seat availability, easy access to the bus stops, value for fare, ease of paying fare, and transit center information.

Chapter 12 Sparta Riders Comments

The survey had an open-ended question asking respondents for any further comments or suggestions. Here is a tally of comments, broken down by line. Note that shaded areas indicate high numbers of responses.

	Comment	# of Responses
1. Westgate	Buses should run continuously and later into the evening	////////
	Doing great/wonderful driver/SPARTA is nice	///
	Run bus on Sundays	////
	Move stop on Fairfax	/
	More buses on Saturdays	////
	SPARTA needs more money	/
	Cover a wider area/more busses	/
	Bus schedule should be listed at stops	/
2. Hillcrest	Shelters/places to sit at the bus stops	//
	Buses should run continuously and later into the evening	////
	More buses on Saturdays	//
	Drivers need a better attitude and be nicer to people on the bus	/
	Need a stop on East Way Drive	/
	Buses should maintain the schedule/wait if they are early	/
	Buses should be run at 30 min intervals	/
	Sunday service	//
	Answer the phone at the center	/
3&4. N./S. Church St.	Cover a wider area/more buses	////
	Run buses more often	/
	Bus should go to Walmart/deaf and blind school/Radio Shack/ Magnolia Place/Union St./Chesnee Gaffney	////
	Buses should run continuously and later into the evening	///
	Doing great/wonderful driver/SPARTA is nice	/

5. Sparta Community College	Buses should run continuously and later into the evening	/
	More routes/more busses	//
	Poor attitude from the driver to homeless	/
6. S. Liberty St.	More buses on Saturdays	/
	Sunday service	///
	Stop at Dorman Centre on Saturday	/
	More coverage	/
7. Crestview	Buses should run continuously and later into the evening	////
	Bigger buses	//
	Buses should have Sanitizer and Clorox wipes	/
	Bus should stop at Mountain View/school for deaf and blind	//
	Need drivers to be more friendly	//
8. Dorman Centre	Buses should run continuously and later into the evening	////
	Sunday service	/
	Stop at Dorman Centre on Saturday	//
	Buses don't stop where they should	/

One of the main preoccupations of the SPARTA riders across the different lines is the fact that the busses do not run during the evenings. As one comment stated: *“I do not think the bus needs to stop at 5:00 PM People work all day. I think the bus needs to stop running at 11:00 PM”* (SPARTA rider North Church St.). Many of the people who use the service have work schedules that are not covered by the SPARTA service. According to one rider of the Dorman Centre bus line, *“Overall, the buses are well maintained, reliable on time, and the drivers are very friendly and helpful. The biggest problem is that the buses don't run long enough into the evening.”* Considering that this is important to many riders, SPARTA may consider some solutions in order to help serve the population. As another SPARTA rider mentioned: *“If possible, extend the hours that the bus runs even if the price may have to go up,”* suggesting it may be worth investigating whether the ridership would be willing to accept an increase in the fare if the bus runs later.

The limited weekend service is another concern of SPARTA riders; as one rider mentioned: *“Bus don't run on Sunday and half don't run on Saturday”* (SPARTA rider Sparta Community College). There were some specific comments about the service to Dorman Centre. As one rider asked for *“Sunday service for all, and Saturday service for Dorman Centre”* (SPARTA rider Dorman Centre). Additionally, two riders requested more frequent service.

SPARTA riders also mention that it is necessary to expand the service geographically, increasing the number of busses to provide new or extended routes. As one rider commented: *“Buses need to run farther out”* and *“Overall wider area and if possible, 1-2 more buses”* (SPARTA rider N./S.

Church Street). Some of the riders suggested some other places that the bus service could cover. For example, one rider suggested “*New Walmart (Cedar Springs) and Deaf & Blind School. Magnolia Place all need bus services and Union St bus will be greatly appreciated for citizens of Spartanburg*” (SPARTA rider North Church St).

Another issue that appears in the comments section is criticism of the bus stops. As one rider commented: “*I would like to see more shelters at bus stops*” (SPARTA rider Hillcrest); another rider asked “*could you please put a bench so that we can sit while waiting for the bus*” (SPARTA rider Hillcrest). One rider requested timetables at stops.

A few riders suggested that drivers could have a friendlier attitude; one rider stated: “*The poor attitude from the driver. I'm homeless.*” (SPARTA rider Sparta Community College). One rider suggested that “*all the busses should have sanitizers and Clorox wipes.*”

Finally, several riders expressed enthusiasm for SPARTA service: “*Sparta is the way to ride!, Just perfect I love it*” (SPARTA rider South Church St.). One rider stated that Sparta has “*Good service, on time, affordable*” (SPARTA rider Sparta Community College) and another stated that he/she “*have enjoyed every ride*” (SPARTA rider Sparta Community College).

Chapter 13 Conclusions

This survey has evaluated SPARTA’s riders’ satisfaction with many different aspects of the service and the service as a whole. This includes satisfaction with buses, bus stops, bus fares, and SPARTA staff. Overall, SPARTA provides service that most customers are satisfied with. Riders are generally pleased with transit service in the region, with an average overall satisfaction score of 4.1 on a scale from 1 to 5. Riders on the Hillcrest, Church St., and Crestview lines are the most satisfied and riders on the South Liberty Street line are the least satisfied.

Survey respondents are most satisfied with the value and ease of payment of bus fares. However, there are some challenges. In their written responses, many riders indicated that they would prefer that the operation times of bus service be extended in the evenings and weekends. Relative to other factors, respondents are somewhat less satisfied with the transit center and the reliability of bus transfers.

Based on this survey, some ways that SPARTA may improve its service are:

1. Extend bus service into the evenings and weekends, even if this may mean raising fares.
2. Extend bus service geographically, based on desired destinations determined by another ridership preference study.
3. Increase bus frequency.
4. Improve the reliability of bus transfers at the transit center.
5. Work to better develop the SPARTA website.

All of this said, however, SPARTA seems to be providing service that is valued and appreciated by its customers.

ⁱ Kittelson & Associates, United States. Federal Transit Administration, Transit Cooperative Research Program, & Transit Development Corporation. (2003). *Transit Capacity and Quality of Service Manual* (Vol. 100). Washington DC: Transportation Research Board.

ⁱⁱ MORPACE International, Inc. and Cambridge Systematics, Inc. (1999). *TCRP Report 47: A Handbook for Measuring Customer Satisfaction and Service Quality*. Washington DC: Transportation Research Board, National Research Council. Available at http://onlinepubs.trb.org/onlinepubs/jtrcrp_rpt_47-a.pdf

ⁱⁱⁱ Cleland, F. and B. Thompson (2000). *1999 Transit Customer Satisfaction Index Final Report*. Tampa, FL: Center for Urban Transportation Research, University of South Florida. Available at http://jwww.dot.state.fl.us/research-center/Completed_Proj/Summary_PTO/FOOT_BC137_10_rpt.pdf

^{iv} Dowling, R.G., D.B. Reinke, A Flannery, P. Ryus, M. Vandehey, T.A. Petritsch, B.W. Landis, N.M. Roupail, and J.A. Bonneson (2008). *NCHRP Report 616: Multimodal Level of Service Analysis for Urban Streets*. Washington DC: Transportation Research Board of the National Academies. Available at http://onlinepubs.trb.org/onlinepubs/jnchrp_rpt_616.pdf

^v W.C. Gilman & Co. (1977). *A Transit Development Study for Spartanburg, South Carolina*. Spartanburg, SC.

^{vi} Post, Buckley, Schuh & Jernigan, Inc. (1991). *Transit Needs Assessment and Financing Plan for Spartanburg County, SC*. Spartanburg, SC.

^{vii}URS Corporation (2012). *Spartanburg Transit Vision and Master Plan*. Spartanburg, SC.

Spartanburg Area Regional Transit Agency

September 2015

Review of Routes and Schedules

Introduction

This report contains findings and recommendations developed from a site visit by First Transit manager Thomas Narrigan during the period September 21-25, 2015.

The primary purpose of the site visit was to review the current routing and scheduling of fixed route bus service provided by the Spartanburg Area Regional Transit Agency (SPARTA) and recommend changes within the current budget that would improve service to current customers and generate additional ridership.

The findings and recommendations in this report are based on a review of the current timetables and maps; Google Maps satellite mapping; field observations, including riding a round trip on each route one or more times; a review of the Spartanburg County Transit Vision and Master Plan (SCTVMP) report, which was originally dated 2012 and revised in 2013; and discussions with Chris Story, Assistant City Manager and Dennis Locke, Financial Director for the City of Spartanburg, and SPARTA Bus Operators, Dispatchers staff and customers.

Interestingly, this review is sandwiched between two very important transit planning studies.

On the one hand, the SCTVMP takes a big picture look at what transit service in Spartanburg County would be like if adequate funding were available and adequate student, commuter and other customers, who do not currently ride, could be attracted to transit.

On the other hand, the City of Spartanburg and Clemson University graduate level city and planning class are embarking on a comprehensive customer survey that is expected to provide data on customer satisfaction, transit needs and transit trip making, including types of trips and origin and destination information.

The recommendations in this report are designed to move SPARTA in the direction of a full service transit system operating primarily within the City borders and focused primarily on the current ridership, but also with an eye to the future.

This review also recognizes that unless and until other sources of transit operating funds are available, improvements must be limited to making the most of what is currently available. Once additional funding is secured, later phases of recommendations can be implemented using a “building block” approach. As a result, recommendations are grouped into three phases for implementation. In the final phase, the system will be in a position to further expand and begin to include some or all of the measures described in the SCTVMP that are determined to be appropriate.

Background

The SCTVMP report contains excellent detailed historical information on the growth and transition of the transit system that ultimately became SPARTA, including maps of the routes at different points in time. In summary:

- Transit service was established in Spartanburg around the turn of the 20th century.
- Electric streetcar service was converted to bus service and ended in 1936.
- The transit system was managed by Duke Power from the 1920s to 1991 when it was one of the last privately held public transit operations in the United States.
- The transit system route structure developed as a “hub and spoke” configuration with downtown Spartanburg as the hub, and two-way routes reaching to outlying areas. There were no crosstown, shuttle or looping routes.
- As the system began to experience a loss in profitability, routes were shorted and/or combined into loops and run less frequently in an effort to reduce operating costs. These changes did reduce operating costs, but they also made the system less convenient to use and undoubtedly led to decreases in ridership.
- During the later phase of public ownership, several routes were extended to suburban shopping malls which created ridership generators at both ends of some lines.
- The current system of routes is very similar to the basic route structure operated in 1990, although there have been some additional extensions and consolidation of routes.

The current system of routes consists of two basic types:

- Short Loops operating most of the day on weekdays at a 30 minute headway (time between the next bus on the route headed in the same direction):

- Route 3 – North Church
- Route 4 – South Church
- Route 6 – South Liberty
- Route 7 – Crestview
- Long Routes operating on weekdays at a 60 minute headway:
 - Route 1 – Westgate
 - Route 2 – Hillcrest
 - Route 5 – Spartanburg Tech
 - Route 8 – Dorman Center

In general, the Short Loops operate for most of their trip distance as one-way service. They use one or more streets outbound and different streets inbound. As a result, they maximize neighborhood coverage and reduce walking distances to stops in the communities they serve; however, depending on where they are located, customers may need to travel longer distances to get to their destination.

The Long Routes are a combination of two-way operation, loops of various lengths, and deviations to serve areas adjacent to the primary route. Several of these routes were extended to suburban areas where they deviate and loop to serve shopping centers.

In general the Long Routes travel more miles and carry more passengers per trip. They also use larger vehicles and are more like so-called “arterial” routes found in larger transit systems. The Short Loops have the general characteristics found in community level routes, including smaller vehicles carrying fewer passengers per trip as shown in the table below.

<u>Route</u>	<u>Type</u>	<u>Headway (Time Until Next Bus)</u>	<u>Typical Weekday Ridership*</u>	<u>Weekday Riders Per Trip (Round Trip)</u>	<u>Monthly Ridership (April 2015)</u>	<u>Annual Ridership (Sept 2014– Aug. 2015)</u>
1 – Westgate	Long Route	60 min.	284	27	6,036	78,561
2 – Hillcrest	Long Route	60 min.	265	24	3,858	51,714
3 – North Church	Short Loop	30 min.	156	9	3,796	50,205
4 – South Church	Short Loop	30 min.	265	13	4,836	65,645
5 – Spartanburg Tech.	Long Route	60 min.	262	26	4,250	56,128
6 – South Liberty	Short Loop	30 min.	247	15	4,832	61,759
7 – Crestview	Short Loop	30 min.	150	8	2,967	39,306
8 – Dorman Center	Long Loop	60 min.	222	22	3,671	49,396
		Total or Average	1851	16	34,246	452,714

* Average of September 15-17, 2015

Evaluation of Current Service Quality

Mass transit is a time and service based function. So it is not surprising that a primary mission of every transit system is to provide the best possible service within its defined service area using available resources. These resources include operating funds, vehicles, equipment and other capital resources; plus other less quantitative, but equally important service attributes such as an emphasis on customer service, safety and reliability within the culture of the organization.

SPARTA's current transit service is an excellent foundation for meeting its primary mission to serve transit dependent City residents. For a number of reasons, it is also in a fundamentally good position, if and when additional funding becomes available, to expand incrementally and attract additional riders.

In particular, SPARTA's two primary facilities are modern, extremely functional and well sized for current operations and certain types of expanded service.

The Transit Center is a clean, well maintained facility that provides the proper amenities for a central hub pulse system where buses meet at regular time intervals for the convenience of customers who transfer between routes. The Center also provides a convenient transfer to Greyhound intercity bus service; and both SPARTA and Greyhound have staff at the Center to provide information, sell fare media and answer questions. There is adequate, comfortable seating and security does not appear to be an issue.

Likewise, the SPARTA garage at 150 Airflow Drive is well maintained and suitable for the current operation, with room for a modest expansion of the fleet.

The fleet is undergoing a conversion to all low floor buses and to heavier duty buses which are expected to provide more reliable and comfortable service.

Bus Operators are very accommodating to customers, and provided thoughtful comments and ideas for improving service. They demonstrated safe driving skills, and also went out of their way to make sure that customers were able to make necessary connections as part of the "pulse" system that operates from the Transit Center.

There do not appear to be any serious issues concerning fare collection or the operation of the on-board fare collection equipment.

Given the current activities that are the responsibility of management, the staffing is lean, a reflection of the problem of inadequate funding. While it is important to keep costs down, the current level of staffing results in two primary challenges.

The first challenge is the resiliency of management. Under normal circumstances the workload is heavy, but doable. This may not be the case if there were, for instance, unforeseen problems, requirements or staffing issues. Simply put, there is

little or no backup. At the very least there should be a basic plan to trigger the use of external capabilities when needed. In fact this review and the partnership with Clemson University to perform the customer service survey are examples of how external capabilities can assist management.

The second challenge is the inability of management at the current level to take on additional time consuming activities associated with the SCTVMP recommendations, such as a higher level of marketing and promotion, and expanded hours of service. While these activities may be desirable, having adequate management resources is important to the success of these initiatives and improvements.

Review of Routes

The current route structure and schedules were reviewed to determine what, if any, changes could be made to improve the overall operation and make service as responsive as possible to customer needs.

Guidance for this review came from the following three sources:

- The City of Spartanburg requested that the review:
 - Examine how the current routes are operating and develop recommendations for necessary adjustments,
 - Ensure that there is adequate coverage of neighborhoods,
 - Consider providing more direct service from neighborhoods to shopping areas and other generators that would provide a one seat ride (i.e., no need to transfer).
- The consulting firm, Nelson Nygaard, has developed service design guidelines (see appendix for a detailed description) that are helpful in evaluating individual routes and the system as a whole. These include the following important principles that would apply to current and future SPARTA service:
 - Service should be simple to understand.
 - Routes should be as direct as possible.
 - Route deviations should be minimized.
 - Major routes should operate along arterial streets.
 - Routes should operate along the same alignment in both directions.
 - Services should be well coordinated.
 - Service should be consistent throughout the day.
 - Stops should be spaced appropriately.
 - Service design should maximize service.
- Throughout the review, comments and suggestions from employees, and occasionally, customers were recorded and evaluated.

Recommendations

Based on the above guidance, the following areas for improvement are recommended:

Service Deviations

There are two routes that are negatively affected by service deviations:

- Route 2-Hillcrest:
 - 8:30 and 3:30 trips to Converse Heights

These trips travel through a residential neighborhood on narrow streets with numerous turns. On the trips that were observed, there was no ridership on this deviation, and this observation was in line with information from SPARTA employees. In addition, there is extra time needed on each trip that causes the Route 2 bus to be late for the pulse on a daily basis. These trips also require a different pattern of service compared to the regular Route 2 alignment, and miss regular stops on East Main Street.

R-1 Eliminate the deviation for the 8:30 and 3:30 trips through Converse Heights. These trips should operate over the regular Route 2 alignment.

- Dillon Drive Deviation

As part of the Route 2 service deviation to Mary Black hospital, service on most outbound trips and two inbound trips is currently provided to medical office and human services agency locations along Skylyn Drive and Dillon Drive north of the hospital. Although time did not permit a detailed analysis, there were no boardings or alightings north of the hospital on the trips that were observed. There may be an opportunity to reduce the amount of running time and mileage used for this deviation by providing alternative service on either a customer request basis or by a medical shuttle (see recommendation R-7 below.)

R-2 Consider providing alternate service to the Dillon Drive/Skylyn Drive area such as using a medical shuttle or by providing service on some or all trips on a request basis. Given the importance of the medical and human resources facilities in this area, this deviation requires further study before any specific solutions can be considered.

- Route 8-Dorman Center: This route operates from the Transit Center to Westgate Mall and Dorman Center via John B White Sr. Boulevard. There are three deviations, anyone of which can create a problem with on-time performance as follows:

- Ammons Road/Kensington Drive
This is an “on request” deviation that requires a customer to alert the Bus Operator when boarding along the regular route, or call in from the Ammons Road/Kensington Drive area. Ridership is low on the deviation, and there is an unsignalized left turn that is required from Kensington Drive to John B White Sr. Boulevard that is difficult and time consuming at certain times of the day.
- Outbound deviation to Hidden Hill Road and lower East Blackstock Road
On this deviation the bus turns south on Hidden Hill Road, even though its final destination is north, making a deviation before reaching the important outbound destinations of Dorman Center and Westgate Mall.
- One-Way Loop on East Blackstock, W O Ezell Boulevard and Camelot Drive
This is a large loop with little or no ridership.

R-3 It is recommended that Route 8 become the route with the most direct service to Dorman Center and Westgate by eliminating all of the current deviations described above. This would require extending Route 7-Crestview to cover one or more of the current Route 8 deviations. (See recommendation R-5.)

Running Time Problems

SPARTA Dispatchers report that buses on the following routes are most likely to be late at the Transit Center pulse:

- Route 2-Hillcrest – There are two problems on this route. First, as noted above, the deviation on the 8:30 and 3:30 Converse Heights trip is responsible for late arrivals at the Transit Center on both inbound trips. This will be resolved by eliminating the deviation and providing regular service on East Main Street (R-1.)

The second reason for running late is that there is no left turn arrow in the outbound direction on the traffic signal on East Main Street at Drayton Road. When traffic is heavy westbound on East Main Street, significant delays at this intersection cause the bus to run late on the remaining outbound trip and subsequently on the inbound trip to the Transit Center.

R-4 The deviation to the Mary Black Hospital area should be removed from the outbound trips and included on the inbound trips. This will eliminate the left turn problem at Drayton Road on outbound trips and have the added benefit of providing a more direct route to Walmart and the Hillcrest Shopping Center area.

- Route 7-Crestview - On a typical trip on this short loop route, if the driver stays at or near the speed limits and does not encounter any delays, the route may arrive on time or just a few minutes late. Unfortunately, given the nature of this route, delays (traffic, school buses, boarding and alighting of bicycles and customers using mobility devices) are common, causing substantial delays. In short, the route is too long and has too many turns to operate properly, including an unnecessary additional loop to serve the bus shelter on Norris Street. Ideally, this route should become a two-way long route operating to Dorman Center that could provide service to its current customers going downtown and also provide a one-seat ride to shopping and employment centers near Dorman Center.

Both a short term improvement, and a more desirable longer term solution that would require additional operating funds are provided below.

R-5 (Short Term) Change the frequency of this route from one bus every 30 minutes to one bus every 45 minutes and extend the route to serve the Ammons-Kensington deviation of Route 8-Dorman Center as a short loop at the end of the outbound trip. This would eliminate the need for customers on Ammons and Kensington to request service and remove a running time problem from Route 8.

At the same time, this route can be converted from a loop route to a two-way route for most of its length by operating in both directions on the following additional streets:

Outbound via

- South Daniel Morgan Avenue to
- Left on Beacon Street
- Left on Norris Street
- Right on Highland Street
- Left on Gibson Street
- Right on Westover Drive
- Left on Prince Hall Lane
- Right on South Forest Street
- Right on Crescent Avenue
- Left into Pineneedle Drive
- Left on Crescent Avenue
- Left on John B. White Sr. Boulevard
- Left on Kensington Drive.

Inbound via

- Ammons Road

- Right on Barbara Road
- Left on Charlesworth Avenue
- Right on Crescent and follow Outbound routing in reverse.

With this configuration, the bus shelter on Norris Street can be used by customers traveling in both directions without the need for a time consuming and indirect special loop. Outbound customers would board at the shelter. Inbound customers would be able to use the shelter and then have adequate time to cross Norris Street as the bus is approaching on Highland Street.

Outbound service on John B. White Sr. Boulevard between South Daniel Morgan Avenue and Crescent Avenue would be effectively moved east; however, there is already service provided by Route 8 on this entire section of John B White Sr. Boulevard.

Note that it will also be necessary to make adjustments to the Route 6-South Liberty schedule during times of the day when both Route 6 and Route 7 are operated with one bus. There may also be the need to determine how best to operate the Ammons-Kensington loop at the end of the line due to potential traffic signal, street configuration and layover location issues.

R-5 (Long Term) Using the alignment described for the short term, extend the route outbound from Kensington Drive via John B. White Sr. Boulevard to south on Hidden Hill Road, north on East Blackstock Road to Dorman Center, and then continue on Westgate Mall Drive to Westgate Mall. Inbound trips would use East Blackstock Road to Hidden Hill Road to John B. White Sr. Boulevard to Kensington Drive, which would provide two-way service on almost the entire route.

- Route 8-Dorman Center - The above recommendations for Route 7-Crestview are expected to eliminate existing running time problems for this route.

Interlining Routes

Interlining routes is a scheduling and service planning technique that provides a single seat ride from one route to another without the need for the customer to transfer. In reviewing farebox data, which includes counts by route of the number of customers transferring between routes, it appears that interlining would be beneficial for at least one pair of routes.

Interlining Route 3 (North Church) and Route 4 (South Church) would provide a one-seat ride for customers for the entire length of Church Street that is currently served by these routes.

R-6 Implement single-seat rides on Church Street by interlining Route 3 and Route 4. To provide true single seat service, the current policy of requiring all

customers to leave SPARTA buses at the Transit Center would have to be modified.

Crosstown Service

As described above, the SPARTA network of routes developed as spokes radiating from the center of the City. This means that in many cases, it is necessary for customers to travel inbound to the Transit Center to catch a bus outbound to their destination.

Ideally, crosstown service that connects radial routes and outer trip generators has the potential to significantly reduce travel times. The process to plan and implement crosstown service requires three things:

1. Information on where customers and potential customers are starting from and going to, also known as origin-destination data. This data was not available for this review; however, it is expected to be available as a result of the customer service survey described in the Introduction section of this report.
2. A street pattern that allows buses to travel as directly as possible across town.
3. Funding for crosstown service, unless resources are reallocated from other routes in the system, which does not appear to be feasible for SPARTA.

As an alternative, existing routes can be extended to provide some amount of crosstown service. This has effectively already been accomplished by some of the extensions of Long Routes, such as the extensions of Route 1 and Route 8 to Westgate and Dorman Center, and the Mary Black Hospital deviation on Route 2. The long term recommendation for Route 7 (R-5) would also be an example of an extension of a route to eliminate the need for some customers to travel downtown to transfer.

In looking at other crosstown service opportunities, it appears that there is an opportunity to connect several medical facilities with each other and two of the existing SPARTA routes in the northeastern section of the City.

R-7 Consider operating a medical shuttle from the Spartanburg Medical Center on North Church via Drayton Road and Skylyn Drive to Mary Black Hospital, including the Dillon Drive facilities. The shuttle could also be extended to the Walmart on East Main Street as a transfer point with Route 2. This shuttle would connect two existing bus routes (Route 2-Hillcrest and Route 3-North Church) with the medical facilities, provide direct transportation between the facilities, and possibly eliminate the Mary Black Hospital deviation on some or all Route 2 trips.

Given the number of individual dial-a-ride trips that are provided in this area by the Transportation Service Bureau, it may also be worth considering the creation of a partnership between TSB, individual medical providers, and SPARTA to provide some or all of this shuttle service.

Other Considerations

Looping Routes

Interestingly, there did not seem to be any noticeable concern by Short Loop route customers or Operators regarding having to stay on the bus for longer periods of time than would be the case if the route were operated as a two-way route. This is likely because of the fact that these routes have existed for a long period of time, and the Operators have done a good job of explaining to the customers how they operate.

Looking at each of the Short Loop routes, Route 3 and Route 4 have relatively short loops near the end of the line designed to serve multiple destinations and are not recommended for change.

Route 6 and Route 7 travel different streets on the outbound and inbound trips for most of their length and would benefit from two-way operation as previously recommended (R-5) for Route 7.

R-8 Route 6-South Liberty should be split into two different two-way routes, one primarily on the current outbound South Converse/Collins Avenue alignment, and one on the Caulder Avenue/Hudson Barksdale Boulevard alignment. Alternatively, a single bus could operate the current route by alternating the direction of the loop between clockwise (the current direction) and counter clockwise.

Of more concern are Route 1-Westgate and Route 5-Spartanburg Tech, which are Long Routes that essentially operate as a loop. Converting these routes to two-way operation would be expensive, but deserves consideration if and when additional funding becomes available.

R-9 Convert Route 1-Westgate and Route 5 Spartanburg Tech to two-way routes with their own identity (e.g., route 1 could become Route 11 and Route 12 to avoid confusion.)

Midday Breaks

For as long as apparently anyone can remember, each route includes a midday “meal break” which results in a period of no service being provided. In the case of the four short loop routes, an increase in the time between buses from thirty (30) minutes to sixty (60) minutes in the midday schedule is also necessary. These schedule inconsistencies occur at the following times:

<u>Route</u>	<u>Break Time</u> <u>(No Service)</u>
1 - Westgate	11:35 -12:35
2 - Hillcrest	12:35-1:35
3 - North Church	11:05 - 2:05 (11:00 - 2:00)*
4 - South Church	10:35 - 11:05 (10:05 - 2:00)*
5 - Spartanburg Tech.	11:35-12:35
6 - South Liberty	1:00 - 2:00 (9:05 - 2:05)*
7 - Crestview	9:00-1:00 (9:05 - 2:05)*
8 - Dorman Center	12:05-1:05

*Also changes

to 60 minutes between buses.

from 30 minutes

This effectively conflicts with the service guideline that requires that service be consistent throughout the day. It also creates unusually long wait times for customers who travel during these times.

Other transit systems that have meal breaks built into runs for their Operators use a “relief” Operator to take over driving duties while an Operator taking the break is off duty. For SPARTA to eliminate the gaps in service at least one additional Operator would have to be hired and a major rescheduling of the service would have to take place.

The customer service origin-destination survey may give a better idea of the priority to assign to this recommendation. For the longer term, if service is to expand and additional customers are to be convinced to use the system, the disruption caused by this gap in service must be eliminated at some stage of system growth and development.

R-10 Reschedule service to eliminate service gaps during the midday. (This will require adding one or more additional Bus Operator positions.)

Service Extensions

Although there is always the possibility of extending the current routes to some additional trip generators, there were only a few suggestions for extensions that surfaced during the review. While it is likely that there may be more suggestions resulting from the customer service survey those that were reviewed and evaluated as part of this review are as follows:

- New Route: Create Route on Union Street.
During the course of the review, City staff ask SPARTA to evaluate the possibility of adding service operating on Union Street from the Transit Center to a recently constructed shopping area on Cedar Springs Road at Cedar Springs Crossing which includes a Walmart Neighborhood market. A field check of the Union Street corridor revealed that there are few operating non-auto related business that would generate ridership, with the Cedar Springs Road businesses being the rare exception.

Given other priorities for the system, this service does not appear justified at this time.

- Route 1: Westgate: Deviate service into the Parking Lot for the Northwest Center on Saxon Avenue. A suggestion was received from an Operator who observed a number of senior citizens walking from the current stop on Saxon into the Center. Unfortunately entering the parking lot would require extra time and make the routing less direct for other customers.

As a result this deviation is not recommended.

- Route 3- North Church: Extend to the VA Hospital on Boiling Springs Road. One customer and several bus operators suggested providing service to the Veterans Administration hospital north of the City. There is currently no SPARTA fixed route service to this facility; however, TSB provides dial-a-ride service to the general public that would serve the VA Hospital, but cost more than SPARTA bus service.

While there would likely be some ridership if SPARTA provided the service, the VA Hospital is significantly outside the Spartanburg city limits, which raises the issue of what jurisdiction(s) or agencies should participate in funding the service.

R-11 Consider including the VA Hospital as a stop on the Medical Shuttle service that was discussed earlier in this report, and approach the VA Hospital as a partner to provide funding.

Stop Spacing

SPARTA has a large number (465) of marked bus stops for a system its size. This would normally be a cause for concern for system performance; however, given the current number of passengers riding, the effect on running time is limited. As the ridership grows, the number of stops could have more of a negative impact on running times. Also, if stops are clearly not being used, it would be wise to consider consolidating or removing them since there is a cost to maintain bus stops, including replacing damaged and/or faded signs.

R-12 Develop guidelines for bus stop spacing. Apply guidelines to eliminate or consolidate stops that do not meet guidelines.

Weekend Service

Throughout the review, customers and Bus Operators expressed interest in adding regularly scheduled service on Saturdays and beginning service for the first time on Sundays.

Although less expensive than providing service every weekday, weekend service is normally more expensive per hour to provide because it requires additional employees for support functions, including dispatch/customer service employees at the Transit Center and some maintenance support to be sure that there is a way to handle breakdowns and have the fleet ready for service on Monday.

R-13 If and when additional funding becomes available, consider additional Saturday service and new limited service on Sunday.

Night Service

Both customers and Operators also suggested extending the service day by an hour or more.

It is frequently difficult to separate a desire for night service from actual demand and ridership. It is also well beyond the scope of this study to make a determination about which routes would be good candidates. Again, the customer service survey may provide some direction.

Other than experimenting with limited additional fixed route service, there are creative ways to develop and provide extended service hours including:

- Providing a “Guaranteed Ride Home” program that allows customers who need after hours service to call or text a number and receive taxi service. Obviously there would need to be restrictions, arrangements with one or more local taxi companies and a decision on what fare to charge.

- SPARTA could have one or two buses each night available at the Transit Center for final trips. These buses would provide shared rides along existing routes, so that, for instance, one vehicle could service the west side of town, and one vehicle could service the east side of town.
- SPARTA and the TSB could work together to provide a dial-a-ride service similar to one or both of the service patterns described above.
- By tracking the origins and destinations of customers on these trips, SPARTA could extend scheduled transit service on its regular routes based on actual travel patterns.

R-14 Extend transit service to 7:00 PM or later on a trial basis using a "Guaranteed Ride Home" or dial-a-ride program. Consider adding later service to existing routes if and when ridership patterns justify extending the hours of fixed route service.

Building Block Approach

This section provides a building block approach for a logical and feasible transition from SPARTA's current operation to a transit system focused first on better service for current customers, and second, on attracting additional customers who currently use other forms of transportation.

This phased approach is directly related to the amount and timing of additional funding sources and other necessary resources (vehicles, employees, management and supervision, marketing, additional marked bus stops, etc.) as follows:

Phase 1 (As soon as possible)

- *R-1 Route 2-Hillcrest: Eliminate the deviation on the 8:30 and 3:30 trips through Converse Heights. These trips should operate over the regular Route 2 alignment.*
- *R-2 Route 2-Hillcrest: Consider providing service to the Dillon Drive/Skylyn Drive area by providing service on some or all trips on a request basis.*
- *R-4 Route 2-Hillcrest: The deviation to the Mary Black Hospital area should be removed from the outbound trips and included on the inbound trips.*
- *R-5 Route 7-Crestview (Short Term) Change the frequency of this route from one bus every 30 minutes to one bus every 45 minutes and extend the route to serve the Ammons-Kensington deviation of Route 8-Dorman Center.*

- *R-6 Implement single seat rides on Church Street by interlining Route 3 and Route 4 and review the current policy of requiring all customers to leave SPARTA buses at the Transit Center.*

Phase 2 (As funding becomes available)

- *R-3 Route 8-Dorman Center: It is recommended that Route 8 become the route with the most direct service to and from Dorman Center and Westgate by eliminating the remaining deviations.*
- *R-5 Route 7-Crestview (Long Term): Extend the route outbound to Dorman Center and Westgate Mall.*
- *R-7 Medical Shuttle (New): Consider operating a medical shuttle from the Spartanburg Medical Center on North Church via to the Mary Black Hospital area and on to Walmart on East Main Street as a transfer point*
- *R-9 Route 1-Westgate and Route 5 Spartanburg Tech: Convert each route to a pair of two-way routes with their own identity.*
- *R-10 Eliminate gaps in service during the midday on weekdays.*
- *R-14 Extend transit service to 7:00 PM or later on a trial basis using a “Guaranteed Ride Home” or dial-a-ride program.*
- *Review SPARTA management and supervisory structure to ensure that the proper levels are in place.*

Phase 3 (With additional funding)

- *R-8 Route 6-South Liberty: Split into two different two-way routes, one primarily on the current outbound South Converse/Collins Avenue alignment, and one on the Caulder Avenue/Hudson Barksdale Boulevard alignment or operate as a two-way loop.*
- *R-11 Consider including the VA Hospital as a stop on the Medical Shuttle, and approach the VA Hospital as a partner to provide funding.*
- *R-12 Develop guidelines for bus stop spacing. Apply guidelines to eliminate or consolidate stops that do not meet guidelines.*
- *R-13 If and when additional funding becomes available, consider additional Saturday service and new limited service on Sunday.*

- *R-14 Consider extending scheduled service to 7:00 PM or later on one or more existing routes if and when ridership patterns justify fixed route service.*
- *Review SPARTA management and supervisory structure to provide adequate capacity and resiliency for future responsibilities.*